baby lock®

emore™

Instruction and Reference Guide

Model BLMR

Baby Lock Consumer Helpline: 800-313-4110
www.babylock.com

CONGRATULATIONS ON CHOOSING OUR MACHINE

Your machine is the most advanced computerized household embroidery machine.
To fully enjoy all the features incorporated, we suggest that you study the manual.

PLEASE READ BEFORE USING THIS MACHINE

For safe operation

1. Be sure to keep your eye on the needle while embroidering. When machine is running do not touch the handwheel, thread take-up lever, needle, or other moving parts.
2. Remember to turn off the power switch and unplug the cord when:
   - Operation is completed
   - Replacing or removing the needle or any other parts
   - A power failure occurs during use
   - Maintaining the machine
   - Leaving the machine unattended.
3. Plug the machine directly into the wall. Do not use extension cords.

For a longer service life

1. When storing this machine, avoid direct sunlight and high humidity locations. Do not use or store the machine near a space heater, iron, halogen lamp, or other hot objects.
2. Use only neutral soaps or detergents to clean the case. Benzene, thinner, and scouring powders can damage the case and machine, and should never be used.
3. Do not drop or hit the machine.
4. Always consult the operation manual when replacing or installing any assemblies, the presser feet, needle, or other parts to assure correct installation.

For repair or adjustment

In the event a malfunction occurs or adjustment is required, first follow the troubleshooting table in the back of the operation manual to inspect and adjust the machine yourself. If the problem persists, please consult your local authorized Baby Lock retailer.

The contents of this manual and specifications of this product are subject to change without notice.

For additional product information and updates, visit our web site at www.babylock.com

Important Safety Instructions

Please read these safety instructions before attempting to use the machine.
This machine is intended for household use.

DANGER - To reduce the risk of electric shock:

1 **Always** unplug the machine from the electrical outlet immediately after using, when cleaning, when making any user servicing adjustments mentioned in this manual, or if you are leaving the machine unattended.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons.

2 **Always** unplug the machine from the electrical outlet when removing covers, lubricating, or when making any adjustments mentioned in the instruction manual:

- To unplug the machine, switch the machine to the symbol "O" position to turn it off, then grasp the plug and pull it out of the electrical outlet. **Do not** pull on the cord.
- Plug the machine directly into the electrical outlet. Do not use an extension cord.
- **Always** unplug your machine if the power is cut.

3 **Never** operate this machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or water is spilled on the unit. Return the machine to the nearest authorized retailer or service center for examination, repair, electrical or mechanical adjustment. While the machine is stored or in use if you notice anything unusual, such as an odor, heat, discoloration or deformation, stop using the machine and immediately unplug the power cord. When transporting the machine, be sure to carry it by its handle. Lifting the machine by any other part may damage the machine or result in the machine falling, which could cause injuries. When lifting the machine, be careful not to make any sudden or careless movements, otherwise you may injure your back or knees.

4 **Always** keep your work area clear:

- **Never** operate the machine with any air openings blocked. Keep ventilation openings of the machine free from the build up of lint, dust, and loose cloth.
- **Do not** use extension cords. Plug the machine directly into the electrical outlet.
- **Never** drop or insert **any** object into **any** opening.
- **Do not** operate where aerosol (spray) products are being used or where oxygen is being administered.
- **Do not** use the machine near a heat source, such as a stove or iron; otherwise, the machine, power cord or garment being embroidered may ignite, resulting in fire or an electric shock.

5 Special care is required when embroidering:

- **Always** pay close attention to the needle. Do not use bent or damaged needles.
- Keep fingers away from **all** moving parts. Special care is required around the machine needle.
- Switch the machine to the symbol "O" position to turn it off when making any adjustments in the needle area.
- **Do not** use a damaged or incorrect needle plate, as it could cause the needle to break.
- **Do not** push or pull the fabric when embroidering.

6 This machine is **not** a toy:

- Your close attention is necessary when the machine is used by or near children.
- The plastic bag that this machine was supplied in should be kept out of the reach of children or disposed of. Never allow children to play with the bag due to the danger of suffocation.
- Do not use outdoors.

7 For a longer service life:

- When storing this machine, avoid direct sunlight and high humidity locations. Do not use or store the machine near a space heater, iron, halogen lamp, or other hot objects.
- Use only neutral soaps or detergents to clean the case. Benzene, thinner, and scouring powders can damage the case and machine, and should never be used.
- Always consult the operation manual when replacing or installing any assemblies, the presser feet, needle, or other parts to assure correct installation.

8 For repair or adjustment:

- If the Light unit (light-emitting diode) is damaged, it must be replaced by authorized retailer.
- In the event a malfunction occurs or adjustment is required, first follow the troubleshooting table in the back of the operation manual to inspect and adjust the machine yourself. If the problem persists, please consult your local authorized retailer.

Use this machine only for its intended use as described in this manual.

Use accessories recommended by the manufacturer as contained in this manual.

Use only the interface cable (USB cable) included with this machine.

Save these instructions.

The contents of this manual and specifications of this product are subject to change without notice.

For additional product information, visit our web site at www.babylock.com

Federal Communications Commission (FCC)
Declaration of Conformity (For USA Only)

Responsible Party: Tacony Corporation
1760 Gilsinn Lane, Fenton, Missouri 63026

declares that the product

Product Name: Baby Lock Embroidery Machine
Model Number: BLMR

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the retailer or an experienced radio/TV technician for help.
- The included interface cable should be used in order to ensure compliance with the limits for a Class B digital device.
- Changes or modifications not expressly approved by Tacony Corporation could void the user's authority to operate the equipment.

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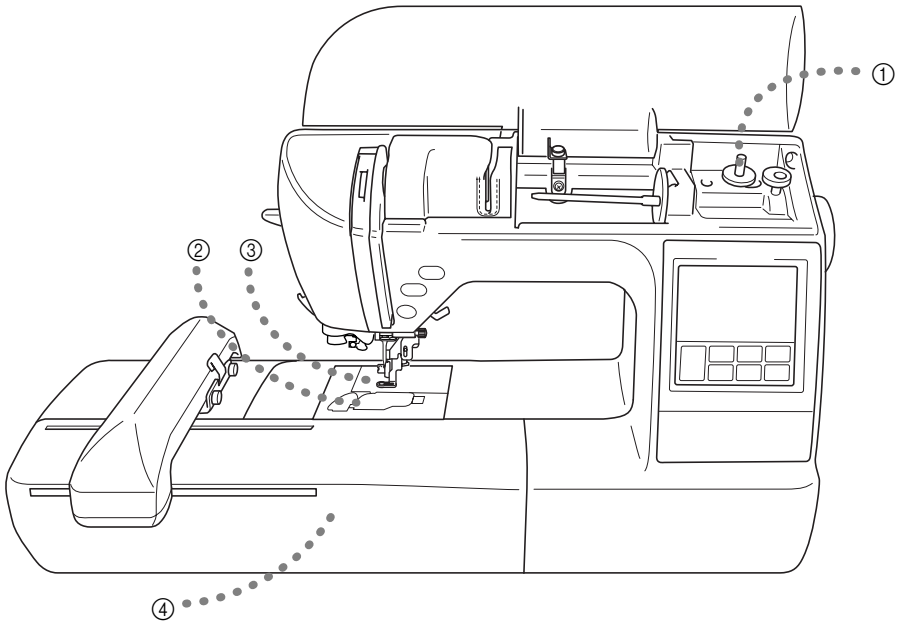
Introduction

Thank you for purchasing this embroidering machine. Before using the machine, carefully read the "Important Safety Instructions" (page 1), and then study this manual for the correct operation of the various functions. In addition, after you have finished reading this manual, store it where it can quickly be accessed for future reference.

Machine Features



① **Simple bobbin-winding**
The bobbin can quickly and easily be wound with thread (page 26).

② **Quick-set bobbin**
You can start embroidering without pulling up the bobbin thread (page 29).

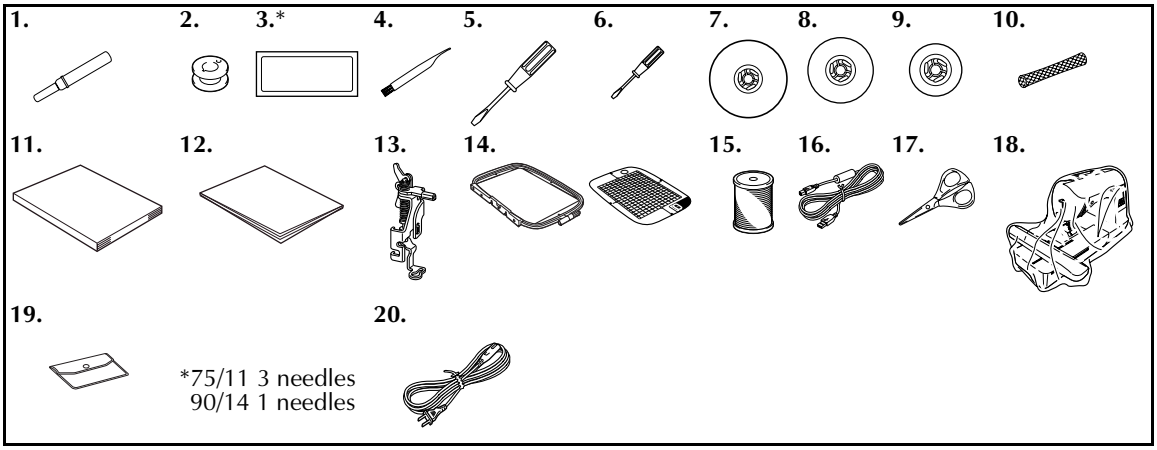
③ **Automatic thread cutting**
The thread can be cut automatically after embroidering (page 52).

④ **Embroidery**
You can embroider built-in embroidery patterns, characters, framed decorations, and designs from optional embroidery cards (page 41).

Accessories

Included accessories

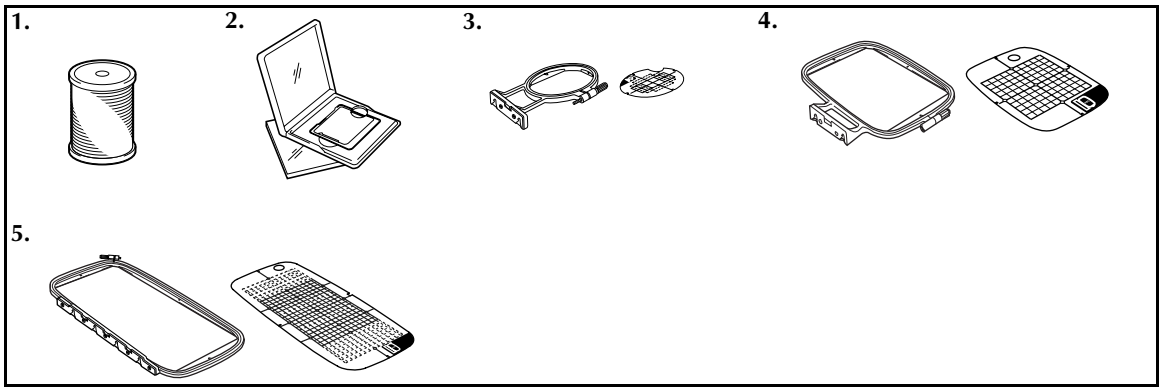
After opening the box, check that the following accessories are included. If any item is missing or damaged, contact your retailer.



No.	Part Name	Part Code	No.	Part Name	Part Code
1	Seam ripper	X54243-051	11	Operation manual	XE2795-001
2	Bobbin (4)	X52800-120	12	Quick reference guide	XE2796-001
3	Needle set	X59535-051	13	Embroidery foot “Q” (on machine)	XD0474-051
4	Cleaning brush	X59476-021	14	Embroidery set (large) H 18 cm × W 13 cm (H 7 inches × W 5 inches)	EF84:Frame EF89:Embroidery sheet
5	Screwdriver (large)	XC8349-021	15	Poly 90 weight bobbin thread	BBTE-W
6	Screwdriver (small)	X55468-051	16	USB cable	XD0745-051
7	Spool cap (large)	130012-054	17	Scissors	XC1807-121
8	Spool cap (medium)	XE1372-001	18	Dust cover	XZ5004-021
9	Spool cap (small)	130013-154	19	Accessory bag	XC4487-021
10	Spool net	XA5523-020	20	Power Cord	XC6052-021

Optional accessories

The following are available as optional accessories.



No.	Part Name	Part Code	No.	Part Name	Part Code
1	Poly 90 weight bobbin thread	BBTE-W	4	Embroidery set (medium) H 10 cm × W 10 cm (H 4 inches × W 4 inches)	EF83:Frame EF88:Embroidery sheet
2	Embroidery card	–	5	Embroidery set (multi-position (extra large)) H 30 cm × W 13 cm (H 12 inches × W 5 inches)	EF85:Frame EF90:Embroidery sheet
3	Embroidery set (small) H 2 cm × W 6 cm (H 1 inch × W 2-1/2 inches)	EF82:Frame EF87:Embroidery sheet			

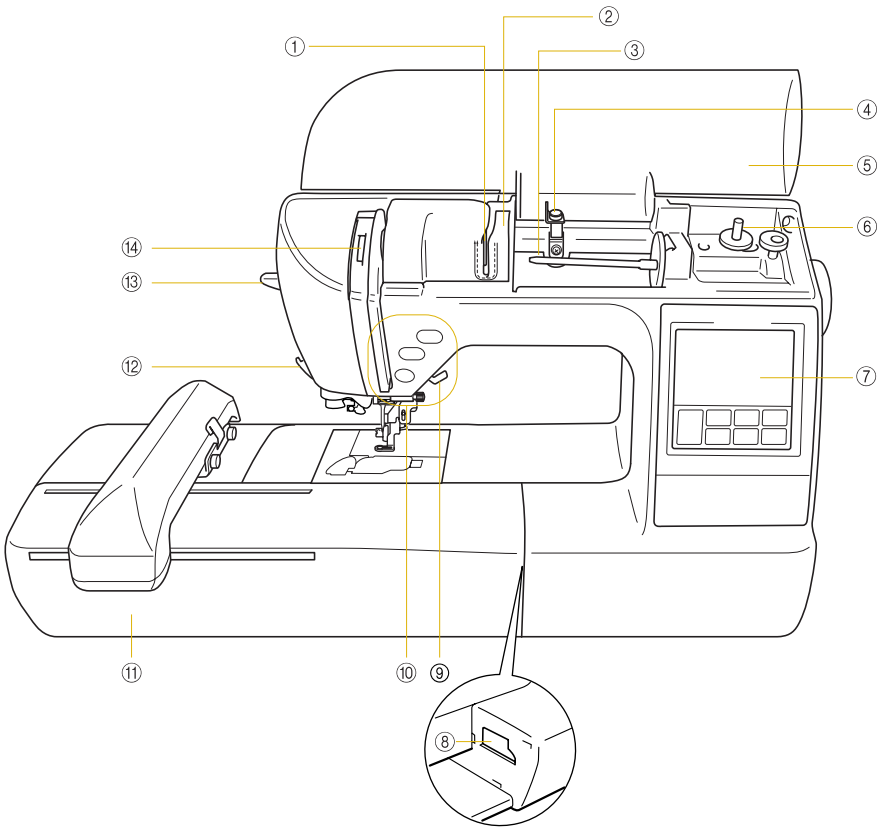
Memo

- All specifications are correct at the time of printing. The part codes are subject to change without notice.
- Visit your Baby Lock retailer for a complete listing of optional accessories available for your machine.
- Use Baby Lock embroidery cards with your machine. Please see your retailer for availability of embroidery cards or visit the Baby Lock web site at www.babylock.com

Names of Machine Parts and Their Functions

The names of the various parts of the machine and their functions are described below. Before using the machine, carefully read these descriptions to learn the names of the machine parts.

Front view



① **Thread guide plate**
Pass the thread under the thread guide plate.

② **Thread guide cover**
Pass the thread behind the thread guide cover when threading the upper thread.

③ **Spool pin**
Place a spool of thread on the spool pin.

④ **Bobbin winding thread guide and pretension disk**
Pass the thread under this thread guide and around the pretension disk when winding the bobbin thread.

⑤ **Top cover**
Open the top cover to place the spool of thread on the spool pin.

⑥ **Bobbin winder**
Use the bobbin winder when winding the bobbin.

⑦ **Operation panel**
From the operation panel, patterns can be selected and edited, and operations for using the machine can be displayed (page 13).

⑧ **Embroidery unit connector slot**
Plug in the connector for the embroidery unit.

⑨ **Presser foot lever**
Raise and lower the presser foot lever to raise and lower the presser foot.

⑩ **Operation buttons**
Use these buttons to operate the machine (page 12).

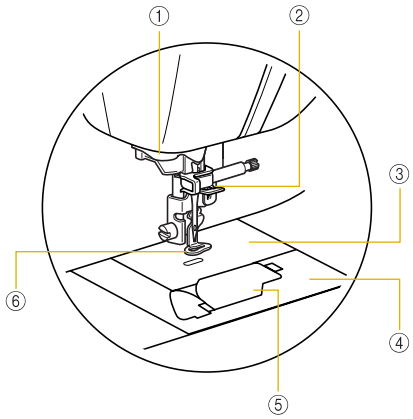
⑪ **Embroidery unit**
Attach the embroidery unit to the machine, and then attach the embroidery frame.

⑫ **Thread cutter**
Pass the threads through the thread cutter to cut them.

⑬ **Needle threader lever**
Use the needle threader lever to thread the needle.

⑭ **Thread take-up lever check window**
Look through the window to check the position of the take-up lever.

Needle and presser foot section



① **Thread guide disk**
Pass the thread through the thread guide disk when using the needle threader to thread the needle.

② **Needle bar thread guide**
Pass the upper thread through the needle bar thread guide.

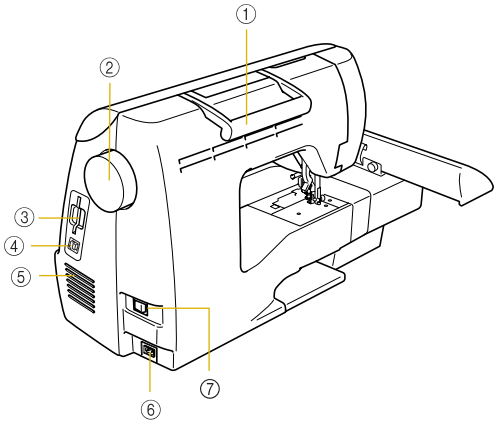
③ **Needle plate**
When the needle is lowered, it enters the hole in the needle plate.

④ **Needle plate cover**
Remove the needle plate cover to clean the bobbin case and race.

⑤ **Bobbin cover/bobbin case**
Remove the bobbin cover, and then insert the bobbin into the bobbin case.

⑥ **Embroidery foot "Q"**
This presser foot is used for embroidering.

Right-side/rear view



① **Handle**
Carry the machine by its handle when transporting the machine.

② **Handwheel**
Turn the handwheel toward you to raise and lower the needle. Always turn the handwheel towards you (counterclockwise).

③ **Embroidery card slot**
Insert the embroidery card.

④ **USB port connector**
Plug the USB cable into the USB port connector.

⑤ **Air vent**
The air vent allows the air surrounding the motor to circulate. Do not cover the air vent while the machine is being used.

⑥ **Power supply receptacle**
Insert the plug on the power cord into the power supply receptacle.

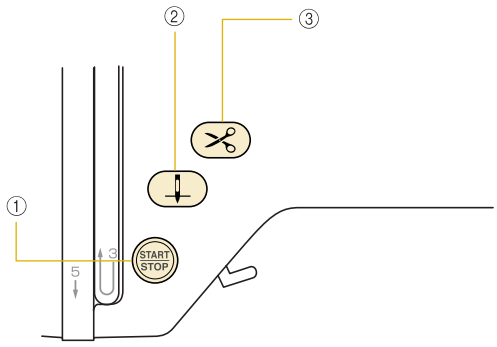
⑦ **Main power switch**
Use the main power switch to turn the machine ON and OFF.

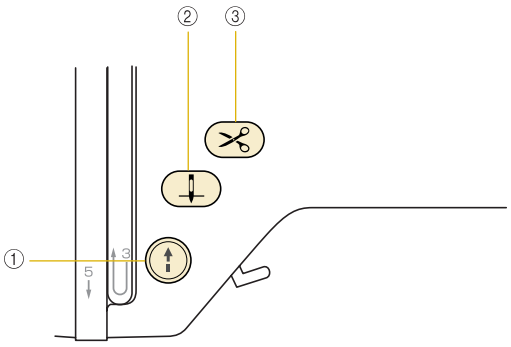
Memo

- Refer to pages 10 through 13 while you are learning to use your machine.

Operation buttons

The operation buttons help you to easily perform various basic machine operations.





① **"Start/Stop" button** (START STOP) / (↑)

Press the "Start/Stop" button to start or stop embroidering. The machine embroiders at a slow speed while the button is pressed. When embroidering is stopped, the needle is lowered in the fabric.
The button changes color according to the machine's operation mode.

Green:	The machine is ready to embroider or is embroidering.
Red:	The machine can not embroider.
Orange:	The machine is winding the bobbin thread, or the bobbin winder shaft is moved to the right side.

② **"Needle Position" button** (↕)

Press the "Needle Position" button to raise or lower the needle. Pressing the button twice sews one stitch.

③ **"Thread Cutter" button** (✂)

Press the "Thread Cutter" button after embroidering is stopped to cut both the upper and the bobbin threads.

CAUTION

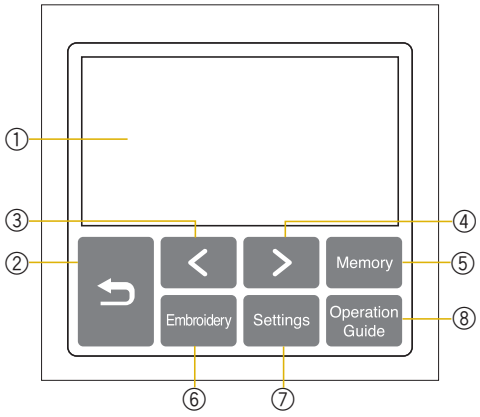
- **Do not press (✂) ("Thread Cutter" button) after the threads have already been cut, otherwise the needle may break, the threads may become tangled or damage to the machine may occur.**

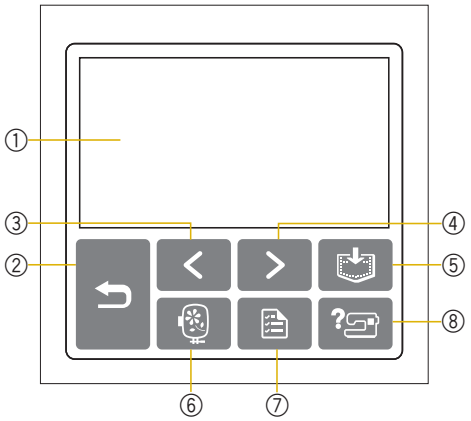
Note

- Do not press (✂) ("Thread Cutter" button) if there is no fabric under the presser foot or while the machine is embroidering, otherwise damage to the machine may occur.
- When cutting thread thicker than #30, nylon thread or other special threads, use the thread cutter on the side of the machine.

Operation panel

The front operation panel has a LCD (liquid crystal display) and operation keys.





① **LCD (liquid crystal display) (touch panel)**
Touch the keys displayed on the LCD to perform operations.
For details, refer to "LCD (Liquid Crystal Display) Operation" (page 22).

② **Back key**
Press to return to the previous screen.

③ **Previous page key**
Displays the previous screen when there are items that are not displayed on the LCD.

④ **Next page key**
Displays the next screen when there are items that are not displayed on the LCD.

⑤ **Memory key** Memory /
Press to store patterns in the machine's memory.

⑥ **Embroidery key** Embroidery /
Press this key to display the pattern type selection screen.

⑦ **Settings key** Settings /
Press to display the settings screen.

⑧ **Help key** Operation Guide /
Press to get help on using the machine.
Displays simple explanations of setting upper thread / bobbin winding / setting bobbin thread / embroidery unit attachment / embroidery frame attachment / embroidery foot attachment / needle replacement.

1 GETTING READY

The various preparations to start embroidering are described in this chapter.

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Embroidery step by step

The basic steps for embroidery are as follows.

1	**Attaching the embroidery unit**	Attach the embroidery unit. (If the embroidery unit is not attached, the machine does not operate.) For details, refer to “Attaching the embroidery unit” (page 17).
2	**Checking the needle**	Use an embroidery needle matched to the fabric. For details on replacing the needle, refer to “Replacing the needle” (page 38).
3	**Setting up the bobbin thread**	For the bobbin thread, wind poly 90 weight bobbin thread and set it in place. For details on setting up the bobbin thread, refer to “Winding/Installing the Bobbin” (page 26).
4	**Preparing the fabric**	Attach a stabilizer material to the fabric, and hoop it in an embroidery frame. For details, refer to “Preparing the Fabric” (page 44).
5	**Attaching the embroidery frame**	Attach the embroidery frame to the embroidery unit. For details on attaching the embroidery frame, refer to “Attaching the Embroidery Frame” (page 48).
6	**Selecting a pattern**	Select an embroidery pattern. For details, refer to “Selecting Embroidery Patterns” (page 50).
7	**Checking the layout**	Check and adjust the size and position of the embroidery pattern. For details on adjusting the layout, refer to “Adjusting the layout” (page 62).
8	**Setting up the embroidery thread**	Set up embroidery thread according to the pattern. For details, refer to “Upper Threading” (page 31).

Attaching the Embroidery Unit

This section describes how to attach the embroidery unit. Before turning on the machine, attach the embroidery unit to it. If the embroidery unit is not attached, the machine does not operate.

Embroidery unit precautions

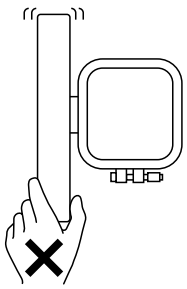
Cautions for the embroidery unit will be explained below.

CAUTION

- **Do not move the machine with the embroidery unit in place. The embroidery unit may be dropped and cause injury.**
- **Keep your hands and other objects away from the embroidery carriage and frame. Otherwise injury may result.**

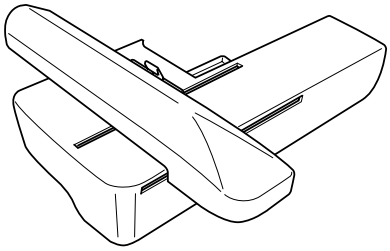
Note

- Do not touch the connector in the embroidery unit connector slot. The connector could be damaged, and it may cause malfunctions.
- Do not lift up on the embroidery carriage, and do not forcefully move it. It may cause malfunctions.

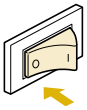


Attaching the embroidery unit

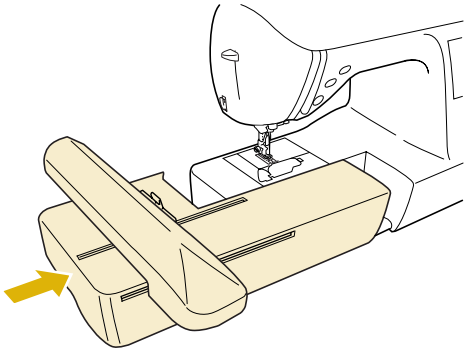
Get the included embroidery unit ready.



1 **Turn off the machine.**

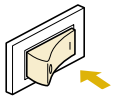


2 **Slide the embroidery unit onto the machine arm.**
Push it in until it clicks and stops.



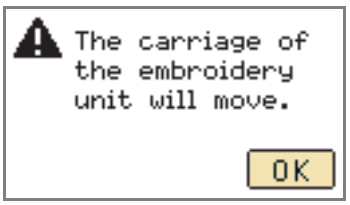
▶ The embroidery unit is attached.

3 **Turn on the machine.**



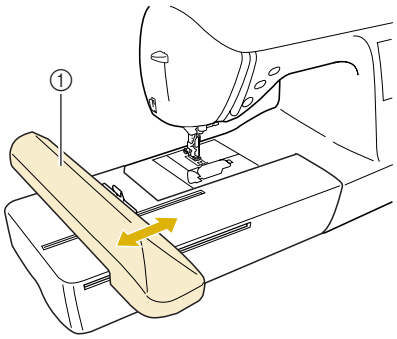
▶ The confirmation message is displayed.

4 **Be sure that no objects or hands are near the embroidery unit and press OK.**



- When an animation is displayed on the screen, the message above will be displayed if you touch the screen with your finger.

▶ The carriage moves to its initial position.



① Carriage

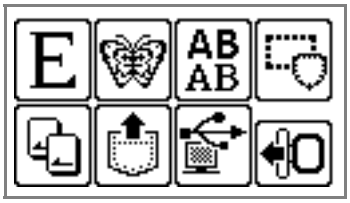
CAUTION

● **Do not put your hands or other objects near the carriage. It may cause injury.**

Note

● If the machine is initialized with hands or objects near the carriage, the screen may return to the initial display. After removing whatever is near the carriage, turn the power on again.

▶ The screen for selecting the embroidery pattern type is displayed.



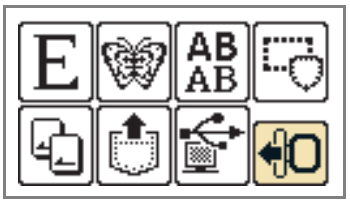
- For details on the embroidery patterns, refer to “Selecting Embroidery Patterns” (page 50).

Removing the embroidery unit

Make sure that the machine is completely stopped and follow the instructions below.

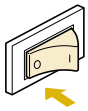
1. **Remove the embroidery frame.**
   - For details on removing the embroidery frame, refer to “Removing the embroidery frame” (page 49).

2. **Press , and then press [OK].**



▶ The embroidery carriage moves into a position where it can be stored.

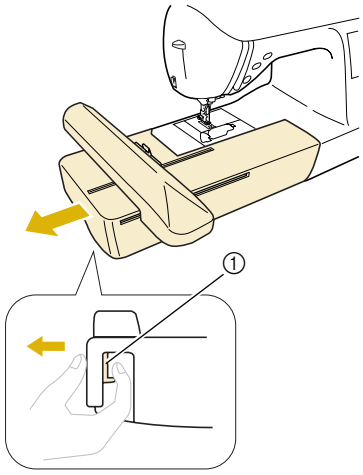
3. **Turn off the machine.**
   - For details, refer to “Turning off the machine” (page 21).



CAUTION

- **Always turn off the machine before removing the embroidery unit. It may cause malfunctions if removed when the machine is turned on.**

4. **Hold the release button on the bottom left of the embroidery unit, and slowly pull the embroidery unit to the left.**

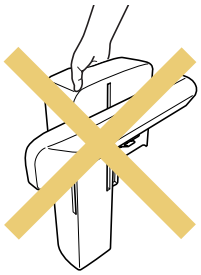


① Release button

▶ The embroidery unit separates from the machine.

CAUTION

- **Do not carry the embroidery unit by holding the release button compartment.**



Turning the Machine On/Off

This section explains how to turn the machine on and off.

Power supply precautions

Be sure to observe the following precautions concerning the power supply.

WARNING

- **Use only regular household electricity for the power source. Using other power sources may result in fire, electric shock, or damage to the machine.**
  - **Make sure that the plugs on the power cord are firmly inserted into the electrical outlet and the power supply receptacle on the machine.**
  - **Do not insert the plug on the power cord into an electrical outlet that is in poor condition.**
- **Turn off the main power and remove the plug in the following circumstances:**
  - **When you are away from the machine**
  - **After using the machine**
  - **When the power fails during use**
  - **When the machine does not operate correctly due to a bad connection or a disconnection**
  - **During electrical storms**

CAUTION

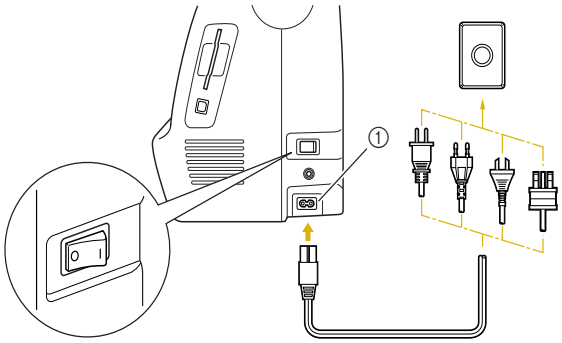
- **Use only the power cord included with this machine.**
- **Do not use extension cords or multi-plug adapters with many other appliances plugged in to them. Fire or electric shock may result.**
- **Do not touch the plug with wet hands. Electric shock may result.**
- **When unplugging the machine, always turn off the main power first. Always grasp the plug to remove it from the outlet. Pulling on the cord may damage the cord, or lead to fire or electric shock.**
- **Do not allow the power cord to be cut, damaged, modified, forcefully bent, pulled, twisted, or bundled. Do not place heavy objects on the cord. Do not subject the cord to heat. These things may damage the cord and cause fire or electric shock. If the cord or plug is damaged, take the machine to your authorized retailer for repairs before continuing use.**
- **Unplug the power cord if the machine is not to be used for a long period of time. Otherwise a fire may result.**

Turning on the machine

Before turning on the machine, be sure to attach the embroidery unit to it. If the embroidery unit is not attached, the machine does not operate. (For details, refer to "Attaching the embroidery unit" (page 17).) Prepare the included power cord.

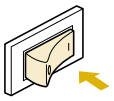
1. **Make sure that the machine is turned off (the main power switch is set to "○"), and then plug the power cord into the power supply receptacle on the right side of the machine.**

2. **Insert the plug of the power cord into a household electrical outlet.**



① Power supply receptacle

3. **Press the right side of the main power switch on the right side of the machine to turn the machine on (set it to "I").**



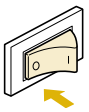
▶ The light, LCD and START/STOP (“Start/Stop” button) light up when the machine is turned on.

Turning off the machine

When you are finished using the machine, turn it off. In addition, before transporting the machine to another location, be sure to turn it off.

1. **Make sure that the machine is completely stopped.**

2. **Press the left side of the main power switch on the right side of the machine to turn the machine off (set it to "○").**



▶ The lamps and the LCD go off when the machine is turned off.

3. **Unplug the power cord from the electrical outlet.**
Grasp the plug when unplugging the power cord.

4. **Unplug the power cord from the power supply receptacle.**

Note

- If a power outage occurs while the machine is being operated, turn off the machine and unplug the power cord. When restarting the machine, follow the necessary procedure to correctly operate the machine.

(For U.S.A. only)

- This appliance has a polarized plug (one blade wider than the other). To reduce the risk of electrical shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

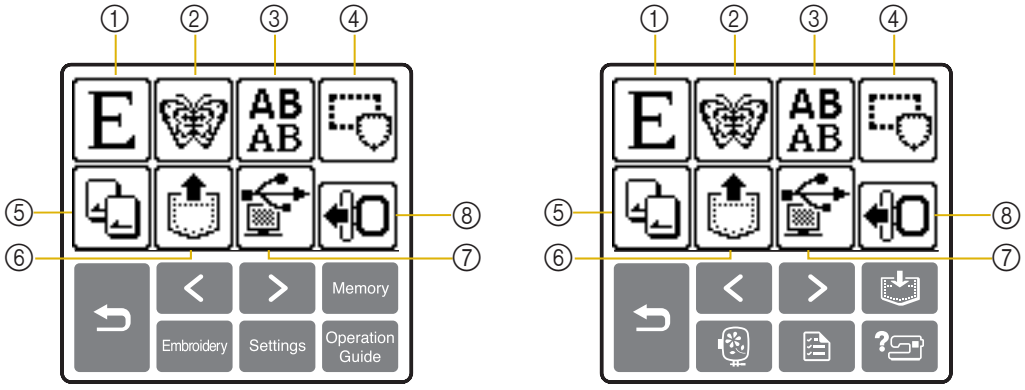
LCD (Liquid Crystal Display) Operation

From the LCD, patterns can be selected and edited, and operations for using the machine can be displayed (page 13).

Viewing the LCD

When the machine is turned on, the opening screen appears. The screen shown below appears after the confirmation message was displayed by lightly touching the LCD. (The machine can be set so that the opening screen is not displayed (page 23).)

■ **Pattern type selection screen**



① Baby Lock Exclusive patterns
② Embroidery patterns
③ Alphabet patterns
④ Frame patterns
⑤ Embroidery card
⑥ Patterns saved in the machine's memory
⑦ Patterns retrieved from the computer
⑧ Moves the embroidery unit carriage to its storage position

Memo

- Refer to "Error messages" (page 82) for messages displayed on the LCD.
- Depending on the model, a different screen may be displayed when the power is turned on.

Changing the machine settings

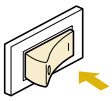
Various machine operations and embroidery settings can be changed.
The attributes that can be set are listed below.

Attribute	Icon	Details	Settings
Thread color display		Changes the thread color display on the embroidery screen.	Name of color/Time/Needle count/ Thread number (#123)
		(When “Thread No. #123” is selected)	Embroidery/Country/Madeira poly/ Madeira rayon/Sulky/Robison anton
Display unit		Selects the measurement units that are displayed.	mm/INCH
Embroidery tension		Adjusts the thread tension for embroidering.	-8 to +8
Max embroidery speed		Specifies the maximum embroidering speed.	
Buzzer		Specifies whether or not a beep is sounded with each operation (page 85).	
Opening screen		Sets whether or not to display the opening screen when the power is turned on. (There are models where this cannot be changed.)	
Language		Allows the language used in the screens to be changed.	English/German/French/Italian/Dutch/ Spanish/Japanese/Danish/Norwegian/ Finnish/Swedish/Portuguese/Russian/ Korean/Thai/others
LCD brightness		Adjusts the brightness of the LCD.	Lighter Darker
Stitch counter		Display the service count of embroidery stitches. The service count is a reminder to take your machine in for regular servicing. (Contact your authorized retailer for details.)	–
Product number	NO.:	The “NO.” is the number for the machine.	–
Program version	VERSION:	Display the program version.	–

Note

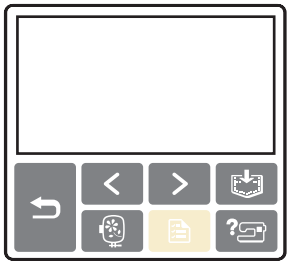
- The items shown in reverse highlighting are the settings at the time of purchase.
- For details on the embroidering settings, refer to“LCD (Liquid Crystal Display) Operation” (page 22).

1 Turn on the machine.



▶ The LCD comes on.

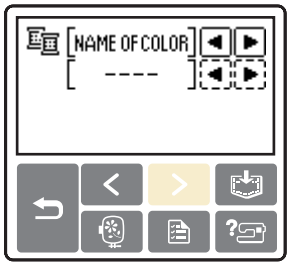
2 Press Settings / (Settings key) on the operation panel.

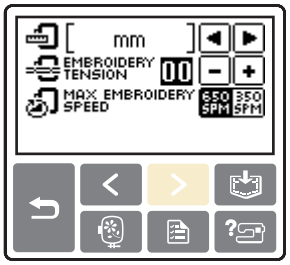


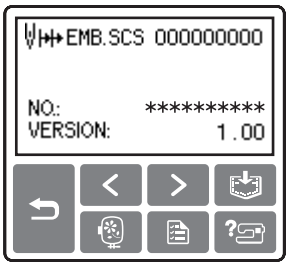
▶ The settings screen appears.

3 Press the item to be set.

Switch screens using < (Previous page key) and > (Next page key).

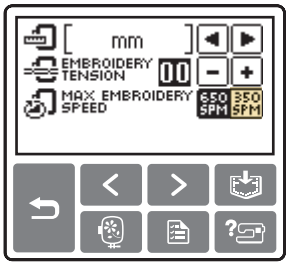




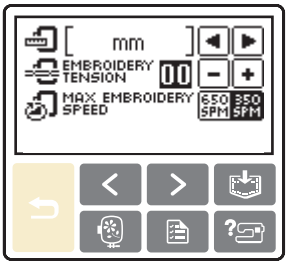


- The items shown in reverse highlighting are the settings at the time of purchase.

☐ **Example:** Changing the maximum embroidering speed.



4 When settings are complete, press (Back key).



▶ The initial screen appears again.

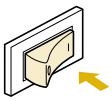
Note

- Settings that are changed are not lost when the power is turned off.

Checking machine operating procedures

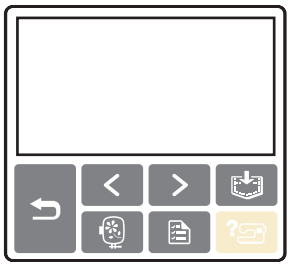
Displays simple explanations of setting upper thread / bobbin winding / setting bobbin thread / embroidery unit attachment / embroidery frame attachment / needle replacement on the LCD.

1 Turn on the machine.



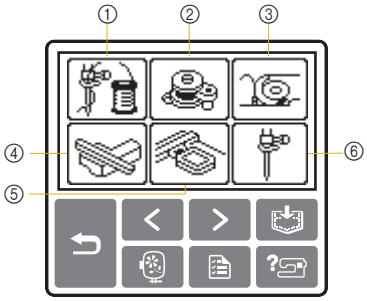
▶ The LCD comes on.

2 Press Operation Guide / ? (Help key) on the operation panel.



▶ The help screen appears.

3 Press the item to be displayed.



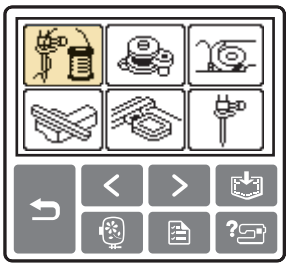
① Upper threading
② Bobbin winding
③ Bobbin installation
④ Embroidery unit attachment
⑤ Embroidery frame attachment
⑥ Needle replacement

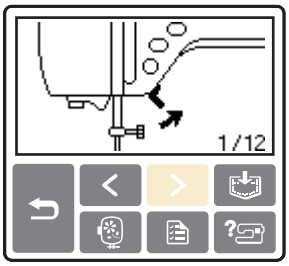
▶ The first screen describing the procedure for the selected topic appears.

• Pressing ⮌ (Back key), returns you to the item selection screen.

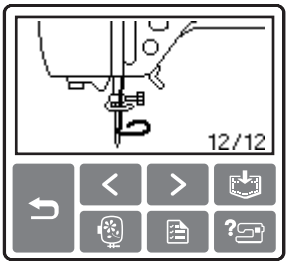
4 Press > (Next page key) to switch to the next page.
If you press < (Previous page key), you return to the previous page.

☐ **Example:** Upper threading

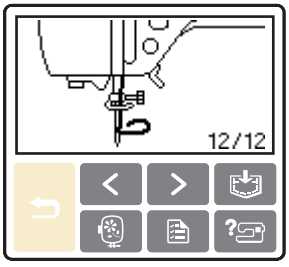




⋮



5 After you finish looking, press ⮌ (Back key) two times.



▶ The initial stitch screen appears again.

Note

● For details on each topic, refer to the corresponding page in this Manual.

Winding/Installing the Bobbin

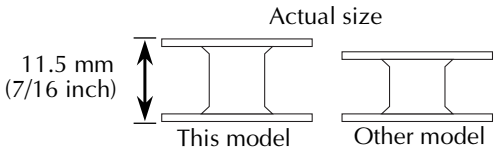
This section describes how to wind the poly 90 weight bobbin thread onto the bobbin, and then insert the bobbin thread.

Bobbin precautions

Be sure to observe the following precautions concerning the bobbin.

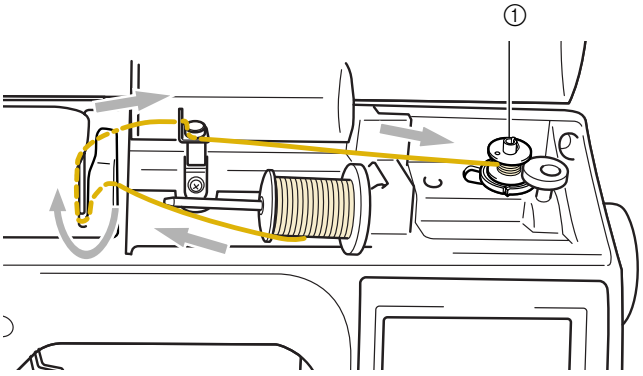
CAUTION

- **Only use the Bobbin (part code: X52800-120) designed specifically for this machine. Use of any other bobbin may result in injuries or damage to the machine.**
- **The included bobbin was designed specifically for this machine.**
  If bobbins from other models are used, the machine will not operate correctly. Use only the included bobbin or bobbins of the same type (part code: X52800-120).



Winding the bobbin

Wind the poly 90 weight bobbin thread around the bobbin to prepare the bobbin thread.

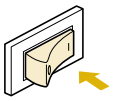


① Bobbin winder

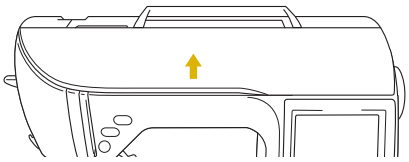
Memo

- The order that the machine should be threaded for winding the bobbin is indicated by a broken line on the machine. Be sure to thread the machine as indicated.

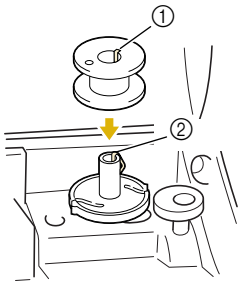
1 Turn on the machine.



2 Open the top cover.

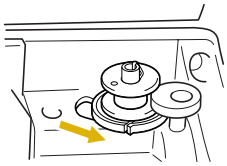


3 Place the bobbin on the bobbin winder shaft so that the spring on the shaft fits into the notch in the bobbin.
Press down on the bobbin until it snaps into place.



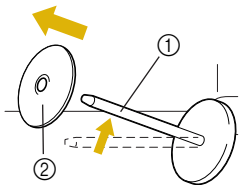
① Notch
② Bobbin winder shaft spring

4 Slide the bobbin winder in the direction of the arrow until it snaps into place.



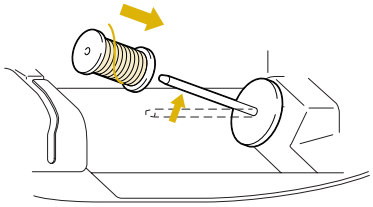
- (START/STOP) / (↑) ("Start/Stop" button) lights up in orange.

5 Remove the spool cap that is inserted onto the spool pin.



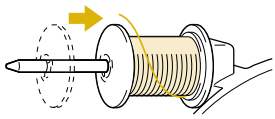
① Spool pin
② Spool cap

6 Place the spool of poly 90 weight bobbin thread for the bobbin onto the spool pin.
Slide the spool onto the pin so that the spool is horizontal and the thread unwinds to the front at the bottom.



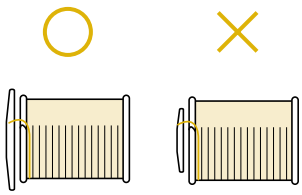
- If the spool is not positioned so that the thread unwinds correctly, the thread may become tangled around the spool pin.

7 Slide the spool cap onto the spool pin.
Slide the spool cap as far as possible to the right, as shown, with the rounded side on the left.

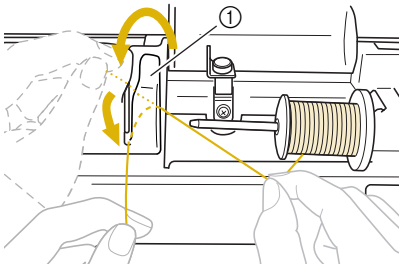


CAUTION

- **If the spool or the spool cap is not positioned correctly, the thread may become tangled around the spool pin and the needle may break.**
- **Three spool cap sizes are available (large, medium and small), allowing you to choose a spool cap that best fits the size of spool being used. If the spool cap is too small for the spool being used, the thread may catch on the slit in the spool and the needle may break.**

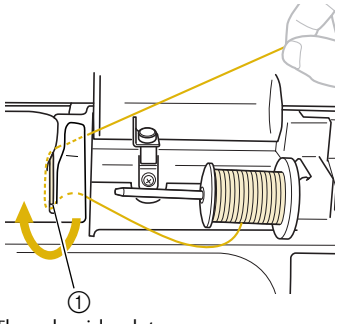


8 **While holding the thread near the spool with your right hand, as shown, pull the thread with your left hand, and then pass the thread behind the thread guide cover and to the front.**



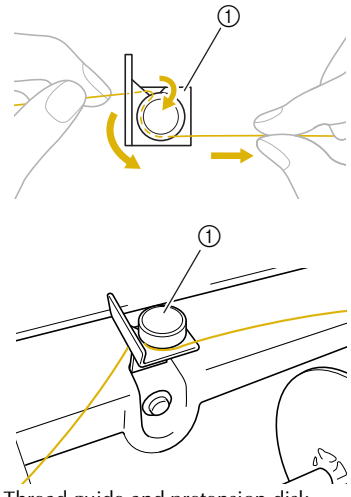
① Thread guide cover

9 **Pass the thread under the thread guide plate, and then pull it to the right.**



① Thread guide plate

10 **Pass the thread under the hook on the thread guide, and then wind it counterclockwise under the pretension disk.**

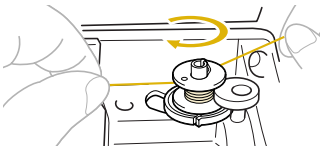


① Thread guide and pretension disk

Note

- Make sure that the thread passes under the pretension disk.

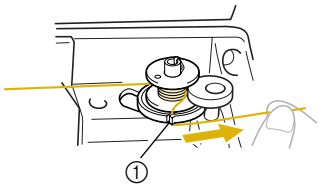
11 **While holding the thread with your left hand, wind the thread that was pulled out clockwise around the bobbin five or six times with your right hand.**



Note

- Make sure that the thread between the spool and the bobbin is pulled tight.
- Be sure to wind the thread clockwise around the bobbin, otherwise the thread will become wrapped around the bobbin winder shaft.

12 **Pass the end of the thread through the guide slit in the bobbin winder seat, and then pull the thread to the right to cut it.**



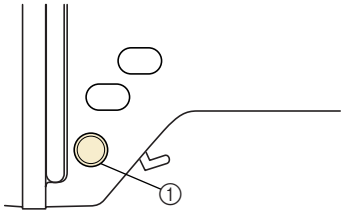
① Guide slit in bobbin winder seat (with built-in cutter)

▶ The thread is cut to a suitable length.

CAUTION

- **Be sure to cut the thread as described. If the bobbin is wound without cutting the thread using the cutter built into the slit in the bobbin winder seat, the thread may become tangled in the bobbin and the needle may bend or break when the bobbin thread starts to run out.**

13 **Press (START/STOP) / (“Start/Stop” button) once to start winding the bobbin.**



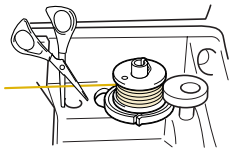
① “Start/Stop” button

- **When the bobbin winding becomes slow, press (START/STOP) / (“Start/Stop” button) once to stop the machine.**

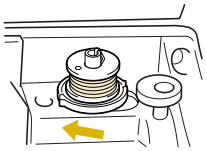
CAUTION

- **When the bobbin winding becomes slow, stop the machine, otherwise the machine may be damaged.**

14 **Use scissors to cut the end of the thread wound around the bobbin.**



15 **Slide the bobbin winder shaft to the left, and then remove the bobbin from the shaft.**



16 **Remove the spool for the bobbin thread from the spool pin, and then close the top cover.**

Memo

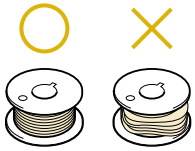
- When the machine is started or the handwheel is turned after winding the bobbin, the machine will make a clicking sound; this is not a malfunction.

Installing the bobbin

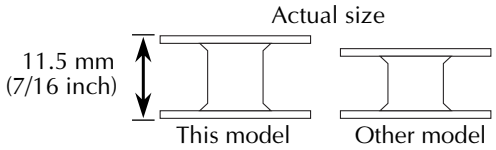
Install the bobbin wound with poly 90 weight bobbin thread.

CAUTION

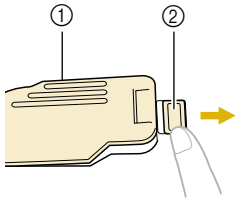
- **Use a bobbin that has been correctly wound with thread, otherwise the needle may break or the thread tension will be incorrect.**



- **The bobbin was designed specifically for this machine. If bobbins from other models are used, the machine will not operate correctly. Use only the included bobbin or bobbins of the same type (part code: X52800-120).**



1 **Slide the bobbin cover latch to the right.**

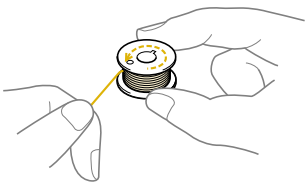


① Bobbin cover
② Latch

▶ The bobbin cover opens.

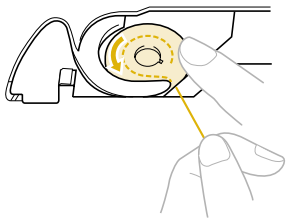
2 **Remove the bobbin cover.**

3 **Hold the bobbin with your right hand and hold the end of the thread with your left.**



- Be careful not to drop the bobbin.

4 Insert the bobbin into the bobbin case so that the thread unrolls to the left.



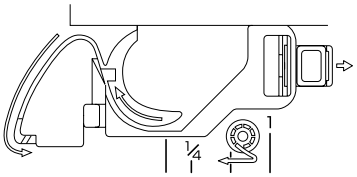
- Be sure to insert the bobbin correctly.

CAUTION

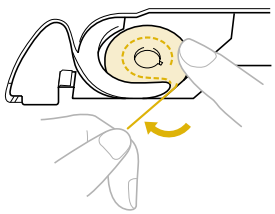
- **Be sure to install the bobbin so that the thread unwinds in the correct direction, otherwise the thread may break or the thread tension will be incorrect.**

Memo

- The order that the bobbin thread should be passed through the bobbin case is indicated by marks around the bobbin case. Be sure to thread the machine as indicated.



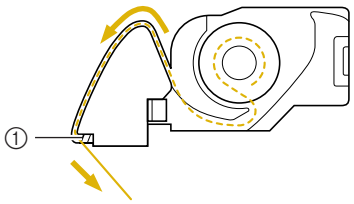
5 Lightly hold down the bobbin with your right hand, and then guide the thread as shown with your left hand.



CAUTION

- **When installing the bobbin, be sure to hold it down with your finger. If the bobbin is not correctly installed, the thread tension will be incorrect.**

6 Pass the thread through the slot as shown, and then pull the thread out toward the front.

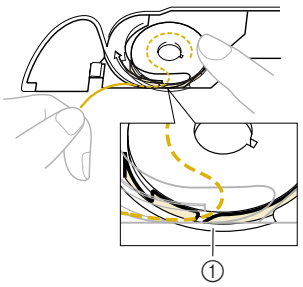


① Cutter

▶ The cutter cuts the thread.

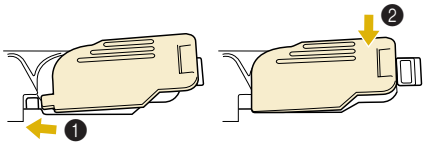
Note

- Make sure that the thread is correctly inserted through the tension-adjusting spring of the bobbin case. If it is not inserted correctly, reinsert the thread.



① Tension-adjusting spring

7 Reattach the bobbin cover.
Insert the tab in the lower-left corner of the bobbin cover, and then lightly press down on the right side.



▶ The bobbin threading is finished.

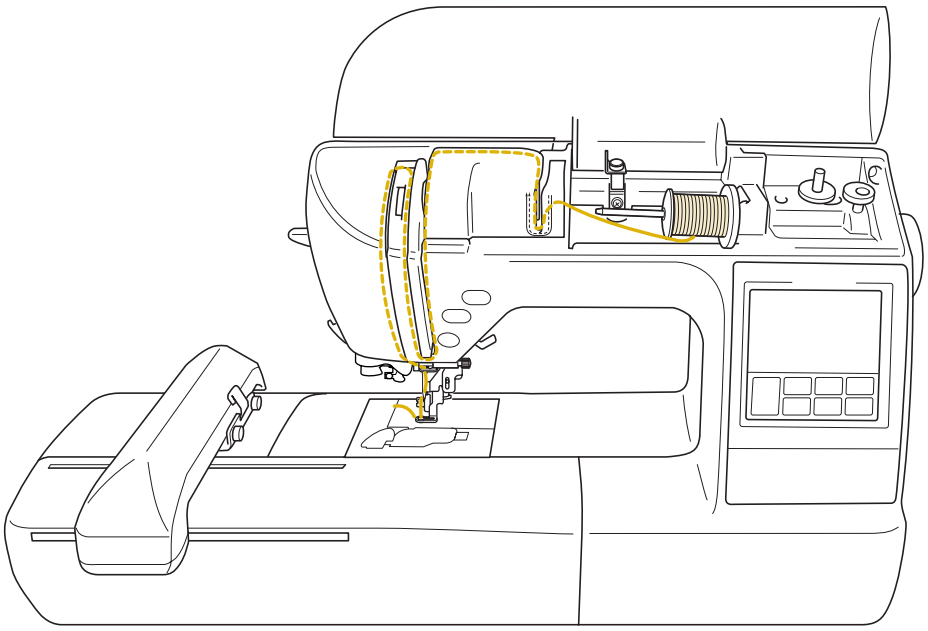
Next, thread the upper thread. Continue with the procedure in “Upper Threading” (page 31).

Memo

- You can start embroidering without pulling up the bobbin thread.

Upper Threading

This section describes how to position the spool for the upper thread, and then thread the needle.



CAUTION

- **When threading the upper thread, carefully follow the instructions. If the upper threading is not correct, the thread may become tangled and the needle may bend or break.**

Memo

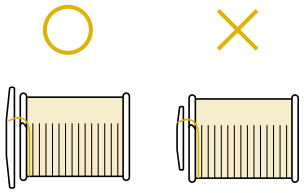
- The order that the machine should be threaded is indicated by a solid line on the machine. Be sure to thread the machine as indicated.

About the spool of thread

Information about the spools of thread is described below.

CAUTION

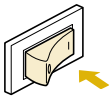
- **Three spool cap sizes are available (large, medium and small), allowing you to choose a spool cap that best fits the size of spool being used. If the spool cap is too small for the spool being used, the thread may catch on the slit in the spool and the needle may break.**



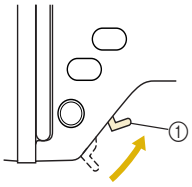
Threading the upper thread

Set the spool of thread on the spool pin, and then thread the machine.

1 Turn on the machine.



2 Raise the presser foot lever to raise the presser foot.

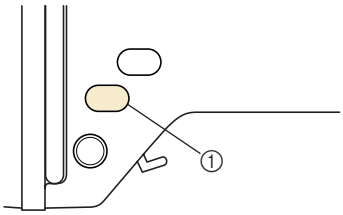


① Presser foot lever

Note

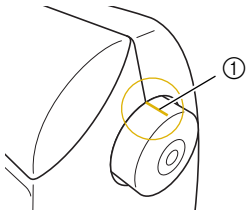
- If the presser foot is not raised, the machine cannot be threaded.

3 Press (“Needle Position” button) once or twice to raise the needle.



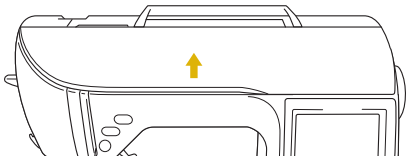
① “Needle Position” button

▶ The needle is correctly raised when the mark on the handwheel is at the top, as shown below. Check the handwheel and, if this mark is not at this position, press (“Needle Position” button) until it is.

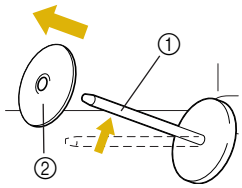


① Mark on handwheel

4 Open the top cover.

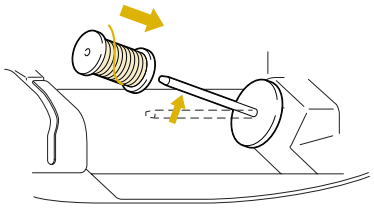


5 Remove the spool cap that is inserted onto the spool pin.



① Spool pin
② Spool cap

6 Place the spool of thread onto the spool pin.
Slide the spool onto the pin so that the spool is horizontal and the thread unwinds to the front at the bottom.

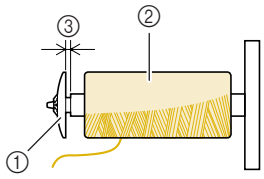


CAUTION

- **If the spool or the spool cap is not positioned correctly, the thread may become tangled around the spool pin and the needle may break.**

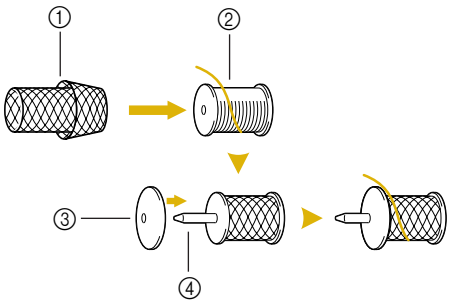
Memo

- When embroidering with fine, cross-wound thread, use the small spool cap, and leave a small space between the cap and the spool.



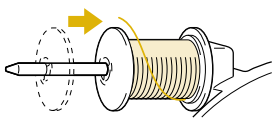
① Spool cap (small)
② Spool (cross-wound thread)
③ Space

- When using thread that winds off quickly, such as transparent nylon thread or metallic thread, place the spool net over the spool before placing the spool of thread onto the spool pin.
  If the spool net is too long, fold it to fit the size of the spool.
- When the spool net is used, the tension of the upper thread will slightly increase. Be sure to check the thread tension. For details, refer to “Adjusting the thread tension” (page 64).

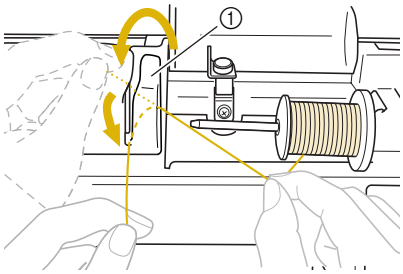


① Spool net
② Spool
③ Spool cap
④ Spool pin

7 Slide the spool cap onto the spool pin.
Slide the spool cap as far as possible to the right, as shown, with the rounded side on the left.

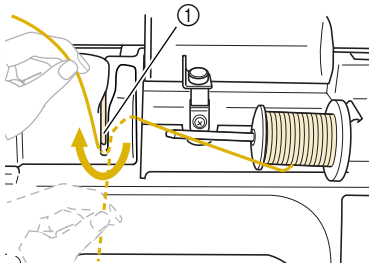


8 While holding the thread lightly with your right hand, pull the thread with your left hand, and then pass the thread behind the thread guide cover and to the front.



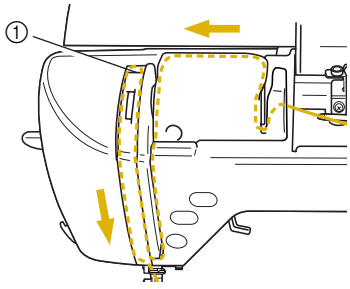
① Thread guide cover

9 Pass the thread under the thread guide plate, and then pull it up.



① Thread guide plate

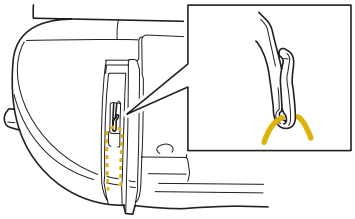
10 While using your right hand to lightly hold the thread passed under the thread guide plate, pass the thread through the thread path in the order shown below.



① Shutter

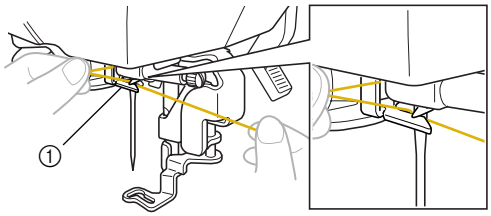
Note

- If the presser foot has been lowered and the shutter is closed, the machine cannot be threaded. Be sure to raise the presser foot and open the shutter before threading the machine. In addition, before removing the upper thread, be sure to raise the presser foot and open the shutter.
- This machine is equipped with a window that allows you to check the position of the take-up lever. Look through this window and check that the thread is correctly fed through the take-up lever.



11 Pass the thread behind the needle bar thread guide.

The thread can easily be passed behind the needle bar thread guide by holding the thread in your left hand, then feeding the thread with your right hand, as shown.



① Needle bar thread guide

Next, use the needle threader to thread the needle. Continue with the procedure in “Threading the needle” (page 34).

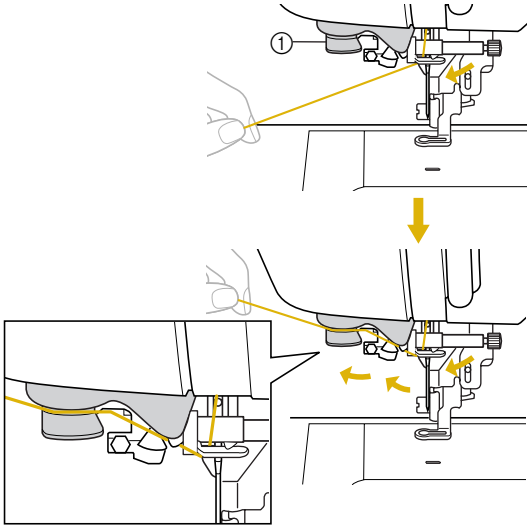
Threading the needle

This section describes how to thread the needle.

Memo

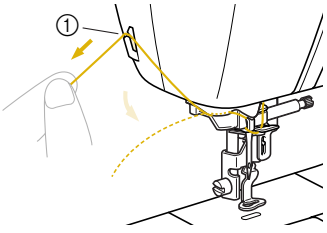
- The needle threader can be used with sewing machine needles 75/11 through 100/16 for embroidery.
- Thread with a thickness of 130/20 or thicker cannot be used with the needle threader.
- If the needle threader cannot be used, refer to “Threading the needle manually (without using the needle threader)” (page 36).

1 Pull the end of the thread passed through the needle bar thread guide to the left, and then pass the thread through the thread guide disk from the front.



① Thread guide disk

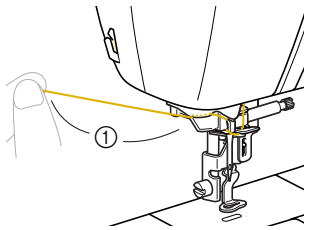
2 Cut the thread with the thread cutter on the left side of the machine.



① Thread cutter

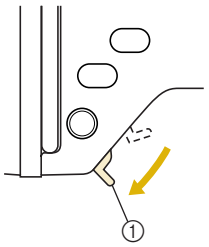
Note

- If the thread is pulled through and cannot be cut correctly, lower the presser foot so that the thread is held in place before cutting the thread. If this operation is performed, skip step 3.
- When using thread that quickly winds off the spool, such as metallic thread, it may be difficult to thread the needle if the thread is cut.
  Therefore, instead of using the thread cutter, pull out about 80 mm (approx. 3 inches) of thread after passing it through the thread guide disks (marked "7").



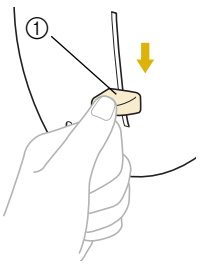
① 80 mm (3 inches) or more

3 Lower the presser foot lever to lower the presser foot.



① Presser foot lever

4 Lower the needle threader lever on the left side of the machine until it clicks, and then slowly return the lever to its original position.

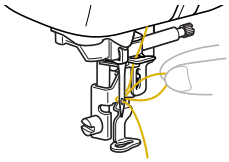


① Needle threader lever

▶ The thread is passed through the eye of the needle.

Note

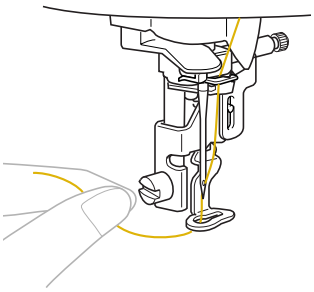
- If the needle was not completely threaded, but a loop in the thread was formed in the eye of the needle, carefully pull the loop through the eye of the needle to pull out the end of the thread.



CAUTION

- **When pulling out the thread, do not pull it with extreme force, otherwise the needle may break or bend.**

5 Raise the presser foot lever, pass the end of the thread through the embroidery foot hole.



▶ The upper threading is finished.
Now that the upper threading and the lower threading are finished, you are ready to begin embroidering.

Note

- If the needle is not raised, the needle threader cannot thread the needle. Be sure to press (“Needle Position” button) to raise the needle before using the needle threader.

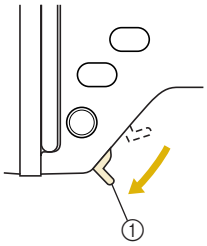
Threading the needle manually (without using the needle threader)

When using special thread, thread with a thickness of 130/20 or thicker, which cannot be used with the needle threader, thread the needle as described below.

1 **Thread the machine to the needle bar thread guide.**

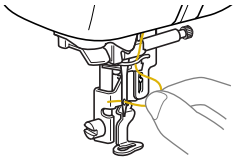
- For details, refer to “Upper Threading” (page 31).

2 **Lower the presser foot lever.**



① Pressor foot lever

3 **Pass the thread through the eye of the needle from front to back.**



4 **Raise the presser foot lever, pass the end of the thread through the embroidery foot hole.**

Replacing the Needle

This section describes how to replace the needle.

Needle precautions

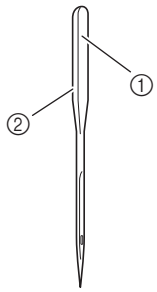
Be sure to observe the following precautions concerning the handling of the needle. Failure to observe these precautions is extremely dangerous, for example, if the needle breaks and fragments are dispersed. Be sure to read and carefully follow the instructions below.

CAUTION

- **Only use home sewing machine needles for embroidery. Use of any other needle may bend the needle or damage the machine.**
- **Never use bent needles. Bent needles can easily break, possibly resulting in injuries.**

Checking the needle

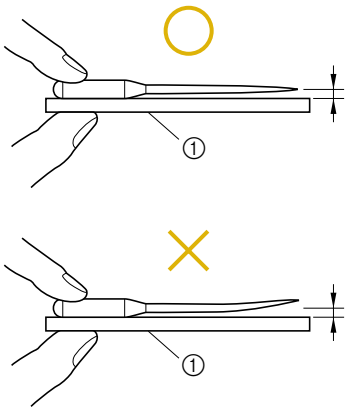
Embroidering with a bent needle is extremely dangerous since the needle may break while the machine is being operated.
Before using the needle, place the flat side of the needle on a flat surface and check that the distance between the needle and the flat surface is even.



① Flat side
② Needle type marking

CAUTION

- **If the distance between the needle and the flat surface is not even, the needle is bent. Do not use a bent needle.**

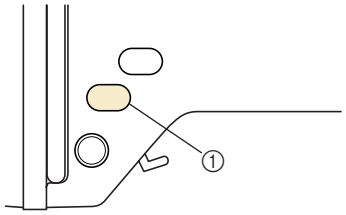


① Flat surface

Replacing the needle

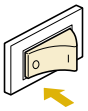
Replace the needle as described below. Use the screwdriver and a needle that has been determined to be straight according to the instructions in “Checking the needle”.

1 **Press (“Needle Position” button) once or twice to raise the needle.**



① “Needle Position” button

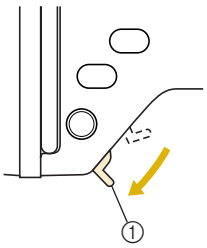
2 **Turn off the machine.**



CAUTION

- **Before replacing the needle, be sure to turn off the machine, otherwise injuries may occur if / (“Start/Stop” button) is accidentally pressed and the machine starts embroidering.**

3 **Lower the presser foot lever.**



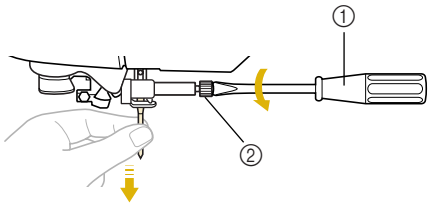
① Presser foot lever

4 **Place fabric or paper under the presser foot to cover the hole in the needle plate.**

Note

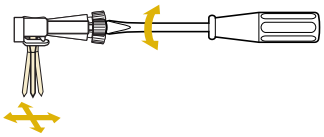
- Before replacing the needle, cover the hole in the needle plate with fabric or paper to prevent the needle from falling into the machine.

5 **Hold the needle with your left hand, and then use a screwdriver to turn the needle clamp screw toward you (counterclockwise) to remove the needle.**

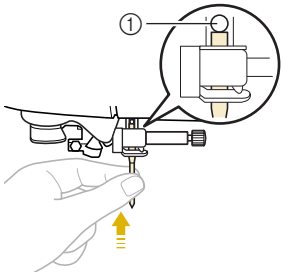


① Screwdriver
② Needle clamp screw

- Do not apply a strong force when loosening or tightening the needle clamp screw, otherwise certain parts of the machine may be damaged.

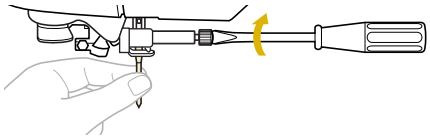


6 **With the flat side of the needle toward the rear of the machine, insert the needle until it touches the needle stopper.**



① Needle stopper

7 **While holding the needle with your left hand, use the screwdriver to tighten the needle clamp screw.**



CAUTION

- **Be sure to insert the needle until it touches the needle stopper and securely tighten the needle clamp screw with the screwdriver, otherwise the needle may break or damage may result.**

2 EMBROIDERY

The steps for embroidering are described in this chapter.

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Embroidering Neatly

This section describes the preparations and basic procedures for embroidering.

What to prepare

The following is necessary for embroidering.

■ **Fabric**

Prepare the fabric for embroidery. Prepare a piece of fabric a little larger than the embroidery frame that matches the size of the pattern you want to embroider.

Note

- Always use stabilizer when sewing embroidery projects, especially when embroidering on lightweight or stretch fabrics. Not using a stabilizer may result in poor quality embroidery designs.
- When embroidering on large pieces of fabric, arrange the fabric so that it does not hang off the table where the machine is placed. If embroidery is done with the fabric hanging off, the embroidery unit movement may be impaired, this could cause the pattern to embroider incorrectly.

CAUTION

- **Do not embroider fabrics that are too thick. To check the fabric thickness, attach the embroidery frame to the embroidery unit, and use (“Needle Position” button) to raise the needle. If there is space between the presser foot and the fabric, the fabric can be embroidered. If there is not space, do not embroider the fabric. Otherwise, the needle may break, resulting in injury.**
- **Be careful when embroidering overlapping patterns. The needle may not easily pierce the fabric, causing the needle to break.**

■ **Stabilizer material**

Stabilizer material is used for backing and topping to stabilize and support the fabric being embroidered so the stitches can be sewn with the least amount of interference or instability. Without the proper type of backing stabilizer, the fabric may move too much within the embroidery frame causing poor alignment of the embroidery. At times, topping will be required in order to manage fabrics with a pile-like surface, such as towels, corduroy and pique knit. There are many types of backing and topping stabilizers with various weights for the various fabrics that you may be sewing. Visit your local retailer to find the stabilizer that is right for your project.

■ **Embroidery thread**

For the upper thread, use a good quality embroidery thread. Choice of the upper thread is a major factor in a successful embroidery design. The thread strength, consistency and weight all affect the design results. These qualities determine how well the machine will embroider and the number of thread breaks during embroidering.
For the bobbin thread, use the recommended embroidery bobbin thread found on the accessories page or visit your local retailer for additional thread.

Note

- For good quality embroidery designs be sure to use embroidery thread designed for embroidery machines.
- Before starting to embroider, be sure there is enough bobbin thread. If you continue embroidering when the bobbin thread is low, the thread may become tangled.

■ **Needle**

Use a 75/11 home sewing machine needle for embroidery. When embroidering on thick fabrics such as denim, use a 90/14 home sewing machine needle for embroidery.

Memo

- A 75/11 needle is already installed when the machine is purchased.
- When replacing the needle, refer to “Replacing the needle” (page 38).

■ **Other**

Embroidery frames “small”, “medium” and “multi-position(extra large)” are optional. For details, refer to “Optional accessories” (page 9).

Preparing the Fabric

After attaching a stabilizer material to the embroidery fabric, it is stretched on an embroidery frame.

Attaching an optional stabilizer material to the fabric

For successful design stitching and to prevent fabric puckering around the design, iron fusible stabilizer to the fabric or place non-fusible stabilizer in the hoop below the fabric.

Memo

- There are many types of backing and topping stabilizers with various weights for the various fabrics that you may be embroidering. Visit your local retailer to find the stabilizer that is right for your project.

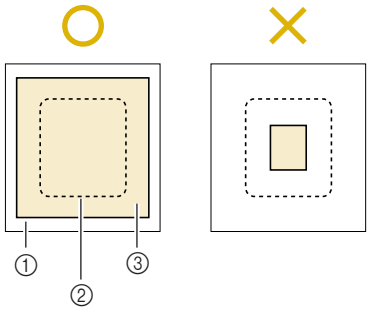
Note

- Always use stabilizer material for embroidery with stretch fabrics, thin fabrics, fabrics with a loose weave and fabrics where stitches easily contract.

CAUTION

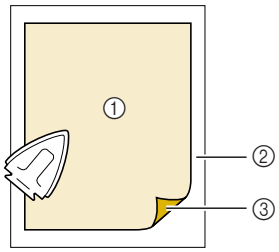
- **Always use stabilizer material with embroidery projects. The needle may break or bend if you embroider without using a stabilizer material for thin fabrics or stretch fabrics. Furthermore, the pattern may not turn out correctly.**

1 Prepare stabilizer material that is larger than the embroidery frame being used.



① Fabric
② Size of embroidery frame
③ Stabilizer material

2 If you are using stabilizers with adhesive, place the adhesive surface of the stabilizer material against the wrong side of the fabric, and iron it with a steam iron.



① Stabilizer material
② Fabric (wrong side)
③ Attached surface

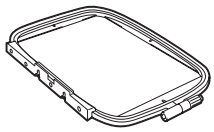
☐ **When it cannot be ironed or placed in the hoop.**
For fabrics, such as towels, which cannot be ironed or for embroidering in places where ironing is difficult, place the stabilizer material under the fabric, and stretch the fabric in the embroidery frame without attaching the stabilizer.

Setting the fabric in the embroidery frame

The fabric is stretched in the embroidery frame. If the fabric is loose, the quality of the embroidery pattern may be poor. Put the fabric in the frame without slack following the steps below. Have a fabric with a stabilizer material attached and the embroidery frame (medium, small, large or multi-position (extra large)) ready.

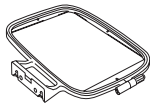
■ **Embroidery frame (large)**

Embroidery can be done in an area with a height of up to 18 cm (7 inches) and a width of up to 13 cm (5 inches). This is used to embroider multiple patterns without changing the fabric position in the frame.



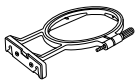
■ **Embroidery frame (medium)[option]**

Patterns with a height of up to 10 cm (4 inches) and a width of up to 10 cm (4 inches) can be embroidered.



■ **Embroidery frame (small)[option]**

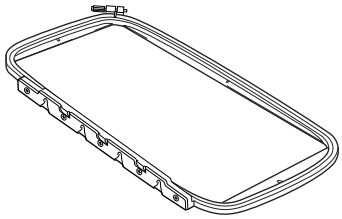
Patterns with a height of up to 2 cm (1 inch) and a width of up to 6 cm (2-1/2 inches) can be embroidered. This is used for letters and other small embroidery.



- There are patterns for which embroidery frame (small) cannot be used.

■ **Embroidery frame (multi-position (extra large))[option]**

Embroidery can be done in an area with a height of up to 30 cm (12 inches) and a width of up to 13 cm (5 inches). This is used to embroider connected or combined characters or patterns, or large patterns.

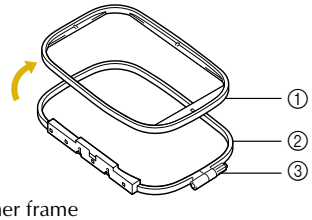


CAUTION

- **Use the embroidery frame that matches the size of the pattern being embroidered. Otherwise, the embroidery frame may be hit by the presser foot and cause injury or needle breakage.**

1 **Loosen the embroidery frame adjustment screw and remove the inner and outer frames, placing the outer frame on a flat surface.**

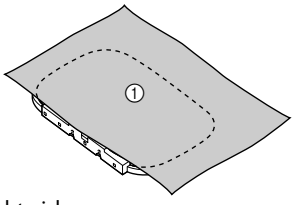
Separate the inner and outer frame by removing inner frame upward.



① Inner frame
② Outer frame
③ Adjustment screw

2 **Place the fabric with the stabilizer material on top of the outer frame.**

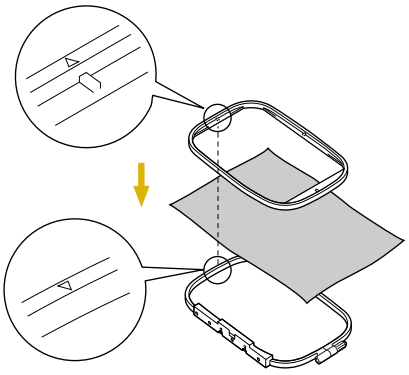
Have the right side of the cloth up.



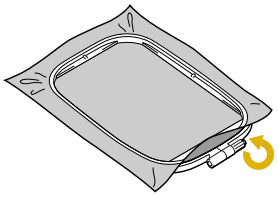
① Right side

3 **Press the inner frame in from the top of the fabric.**

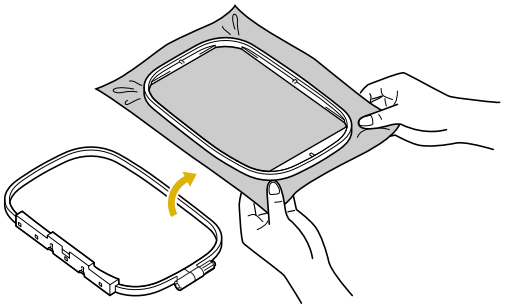
Line up △ on the inner frame and ▽ on outer frame.



4 **Tighten the adjustment screw by hand just enough to secure the fabric.**



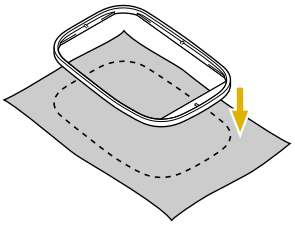
5 **Gently remove the fabric from the frame without loosening the adjustment screw.**

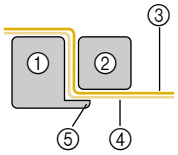


Memo

- This precautionary step will help reduce pattern distortion while embroidering.

6 **Press the inner frame in from the top of the fabric again, lining up △ on the inner frame and ▽ on outer frame.**

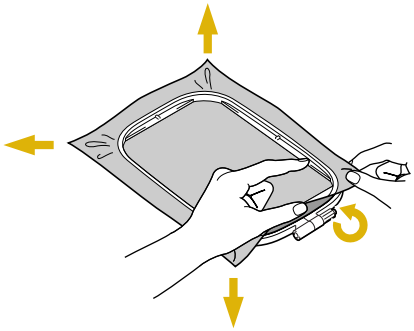




① Outer frame
② Inner frame
③ Fabric (right side)
④ Stabilizer material
⑤ Ledge of outer frame

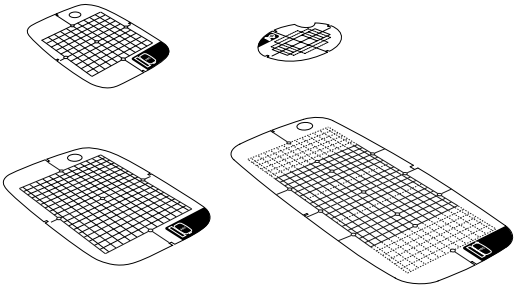
- Press down firmly until the inner frame is securely pressed against the ledge of the outer frame.

7 **Tighten the adjustment screw while removing any slack in the fabric by hand. The goal is to have a drum-like sound when the stretched fabric is struck lightly.**

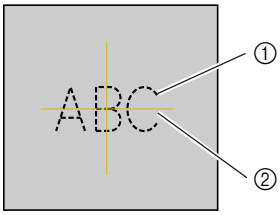


■ Using embroidery sheets

If the embroidery sheet attached to the embroidery frame is used, the embroidery can be embroidered in exactly the right position on the fabric.

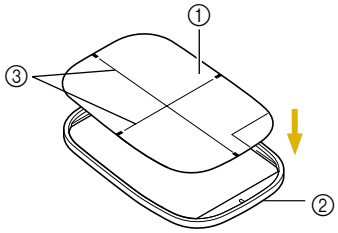


1 Make a mark with a chalk pen at the center of the position for the pattern to be embroidered.



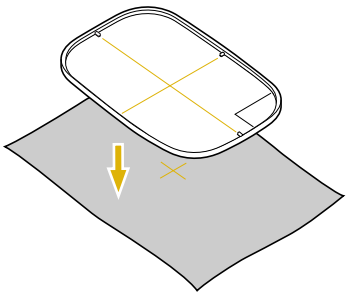
① Embroidery pattern
② Mark

2 Place the embroidery sheet on the inner frame.



① Embroidery sheet
② Inner frame
③ Embroidery sheet base lines

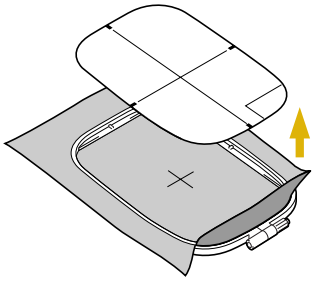
3 Line the mark on the fabric up with the base line on the embroidery sheet.



4 Place the inner frame with the fabric on the outer frame and stretch the fabric.

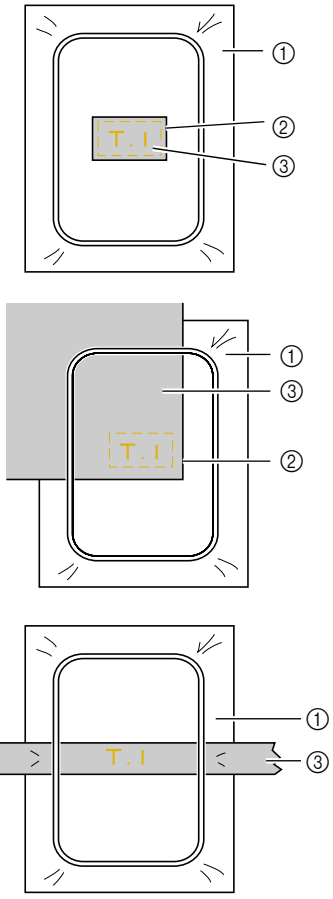
• For details, refer to page 45.

5 Remove the embroidery sheet.



■ Embroidery on fabrics that cannot be stretched on an embroidery frame

When small pieces of fabric that cannot be stretched on an embroidery frame or thin pieces like ribbon are being embroidered, use stabilizer material as a base to stretch on the frame.
We recommend stabilizer material for all embroidery.



① Stabilizer material
② Tack or spray glue
③ Fabric

After completing the embroidery, remove the stabilizer material carefully.

Attaching the Embroidery Frame

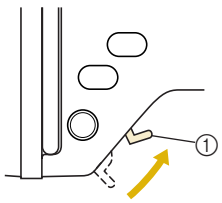
This section describes how to attach the embroidery frame.

Attaching the embroidery frame

1 **Wind the poly 90 weight bobbin thread onto the bobbin and set it into the bobbin case.**

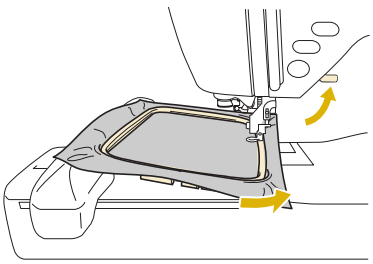
- For details, refer to “Winding/Installing the Bobbin” (page 26).

2 **Raise the presser foot lever.**



① Presser foot lever

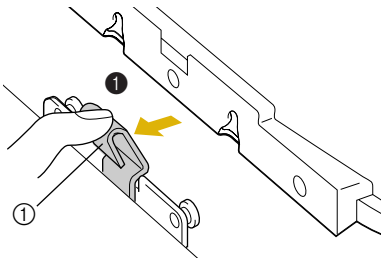
3 **Pass the embroidery frame under the presser foot while raising the presser foot lever even further.**



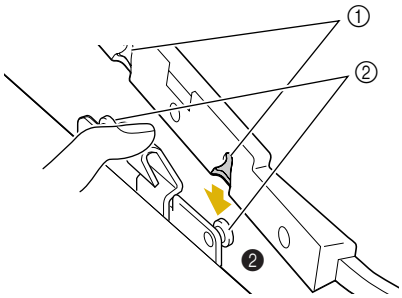
CAUTION

- **Do not hit the needle with your finger or the embroidery frame. It may cause injury or needle breakage.**

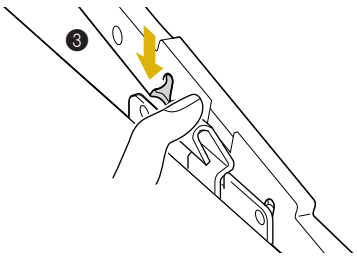
4 **While lightly holding the lever on the frame holder to the left, align the two pins on the embroidery frame holder with the mounting brackets on the frame, and then press the frame into the embroidery frame holder until a click is heard.**
After pressing the front mounting bracket onto the pin so that it clicks into place, press the back mounting bracket into place.



① Lever



① Mounting brackets
② Pins



Note

- Be sure to insert both pins. If only the forward or the back pin is inserted, the pattern may not turn out correctly.

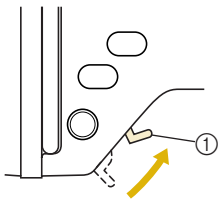
CAUTION

- **Correctly set the embroidery frame into the embroidery frame holder. Otherwise, the presser foot may hit the embroidery frame, resulting in injury.**

Removing the embroidery frame

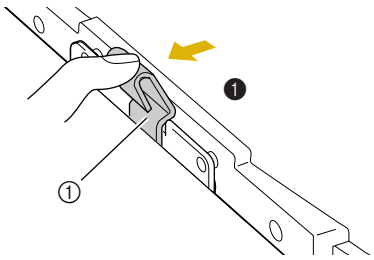
Make sure that the machine is completely stopped and follow the instructions below.

1 **Raise the presser foot lever.**

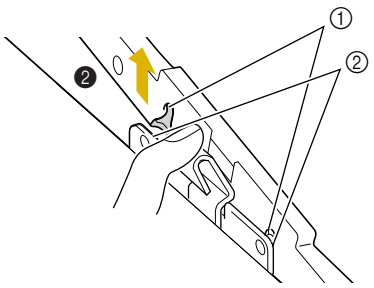


① Presser foot lever

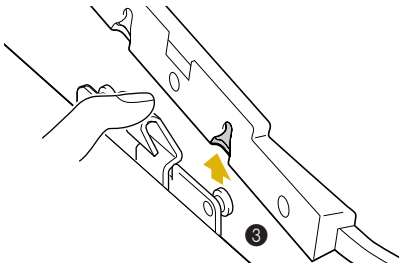
2 **While pushing the lever of the embroidery frame holder to the left, lift the embroidery frame up to remove it.**
Remove the back mounting bracket from the pin, and then remove the front mounting bracket from the pin.



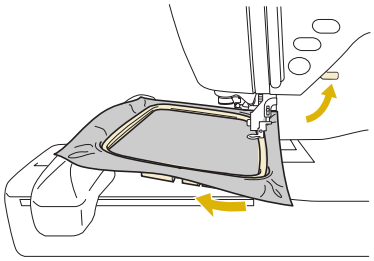
① Lever



① Mounting brackets
② Pins



3 **Pass the embroidery frame under the presser foot while raising the presser foot lever even further.**



CAUTION

- **Do not hit the needle with your finger or the embroidery frame. It may cause injury or needle breakage.**

Selecting Embroidery Patterns

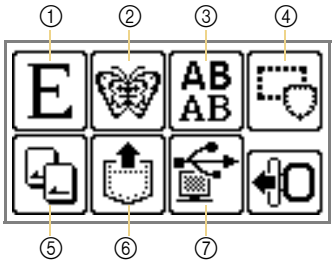
This section provides details on the various types of embroidery patterns available and the procedure for selecting a pattern.

Copyright information

The patterns saved in the machine and embroidery cards are intended for private use only. Any public or commercial use of copyrighted patterns is an infringement of copyright law and is strictly prohibited.

Embroidery pattern types

An embroidery pattern can be selected from the following types available.



① Baby Lock Exclusive patterns
② Embroidery patterns
③ Alphabet patterns
④ Frame patterns
⑤ Embroidery card
⑥ Patterns saved in the machine's memory
⑦ Patterns retrieved from the computer

■ **Embroidery patterns (Baby Lock Exclusive patterns/Embroidery patterns)**

There are total 106 patterns. The patterns are completed by changing the upper thread according to the instructions displayed on the screen.

- For details, refer to “Selecting a Baby Lock Exclusive pattern/embroidery pattern” (page 54).

■ **Alphabet patterns**

There are 6 types of characters (European characters); upper case/lower case/numbers/ symbols.

- For details, refer to “Selecting characters” (page 53).

■ **Frame patterns**

10 shapes, such as squares and circles, can be combined with 12 stitch types.

- For details, refer to “Selecting a frame pattern” (page 55).

■ **Embroidery card (sold separately)**

Patterns from an embroidery card can be embroidered.

- For details, refer to “Using an embroidery card (sold separately)” (page 56).

■ **Patterns saved in the machine's memory**

Patterns, such as frequently used character combinations, can be saved in the machine’s memory to be retrieved later and embroidered. Patterns consisting of up to 12 patterns or 512 KB can be saved.

- For details, refer to “Saving patterns” (page 69).

■ **Patterns retrieved from the computer**

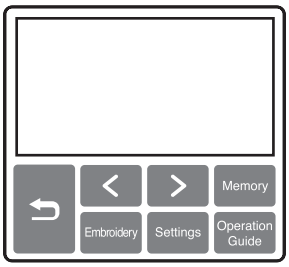
Patterns retrieved from a computer can be embroidered.

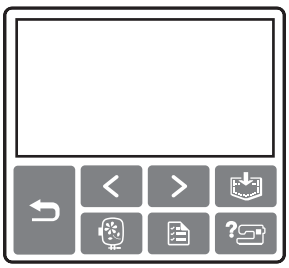
- For details, refer to “Retrieving embroidery patterns from the computer” (page 70).

LCD (liquid crystal display) operation

The LCD (liquid crystal display) is operated using the operation keys on the operation panel. The use of the keys for embroidery will be explained below.

■ **Operation keys**





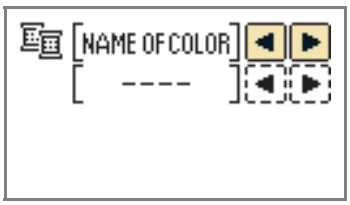
Returns to the previous screen.

When there are patterns that are not displayed on the screen (when < or > is displayed), the previous patterns/subsequent patterns are displayed.

Returns to the type selection screen. The selected pattern is cancelled.

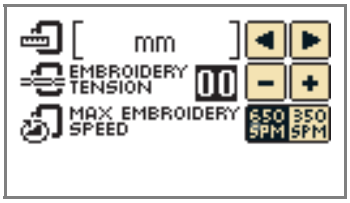
Press this key to adjust language, or change the thread color display or other settings.

Press Settings / (Settings key).



NAME OF COLOR: Typical color name
TIME: Time required for embroidering
NEEDLE COUNT: Needle progress number
#123: Select from the following thread color number sets

- EMBROIDERY (POLYESTER) THREAD#
- COUNTRY (COTTON) THREAD#
- MADEIRA POLY THREAD#
- MADEIRA RAYON THREAD#
- SULKY THREAD#
- ROBISON-ANTON POLY THREAD#



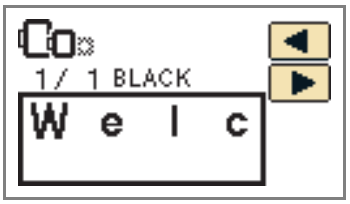
DISPLAY UNIT
The measurement units that are displayed can be selected. [mm/inch]

EMBROIDERY TENSION
The thread tension for embroidering can be adjusted. [-8 to +8]

MAX EMBROIDERY SPEED (SPM)
The maximum embroidering speed can be selected. [650SPM/350SPM]

■ LCD button

CHECK — When a specific pattern is selected, press this key and then, press ◀ ▶ to switch the display. The embroidery settings such as the specified alphabet character string and color are confirmed.



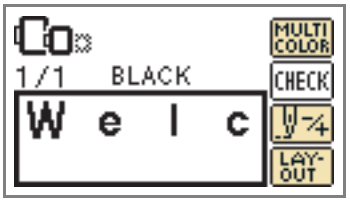
Press this key to change the thread settings.

Press this key to select or cancel programmed thread cutting.

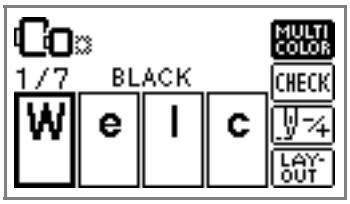
Press + or − to adjust the thread tension.

Press + or − to change the thread density (character patterns only).

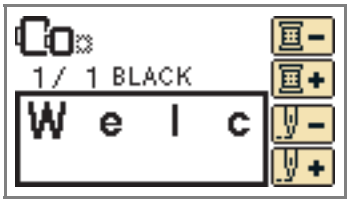
ADJUST — Press this key to adjust the pattern.



MULTI COLOR — Press this key when you want to change the color character by character in character embroidery. Since the machine stops at the end of each character, the upper thread is changed as you embroider.
Press this key again to cancel multi-color.



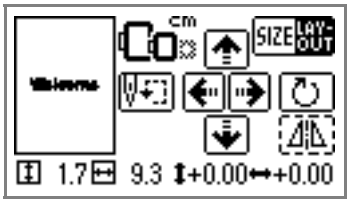
The needle progresses one color or one stitch (if pressed continuously, 9 stitches to 20 stitches) at a time and changes the position for starting the embroidery. This is used when a specific color is not embroidered or when restarting the machine after power has been turned off in the middle of the operation.



	Back one color		Forward one color
	Back one stitch		Forward one stitch

- For details, refer to “Resewing” (page 65).

LAY-OUT — The position of the pattern within the embroidery frame can be checked, and the size and angle can be changed.



- For details, refer to “Adjusting the layout” (page 62).

Memo

- Keys that appear surrounded with a dotted line cannot be used.

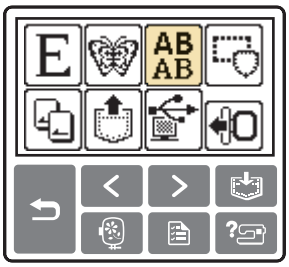
Selecting characters

Specify the characters for embroidery.

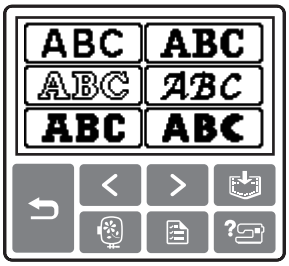
Memo

- When "The pattern is too large for the embroidery frame." is displayed, no more characters can be input.
- Characters of different styles (sans serif, serif, and outline, etc.) cannot be combined.

1 **Select the character stitches.**



2 **Select the character style.**

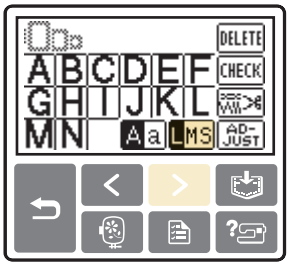


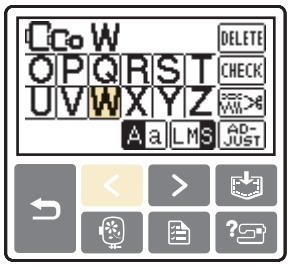
3 **Select the characters.**
If a wrong character was selected, press DELETE.

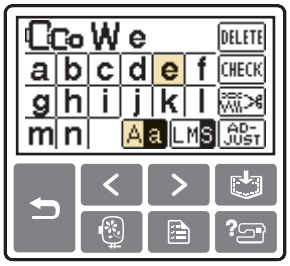
☐ **Example:** Welcome

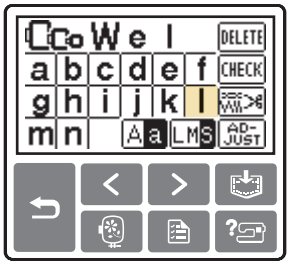
Aa Switch between uppercase/lowercase

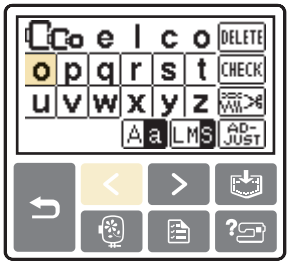
LMS Switch among large/medium/small sizes

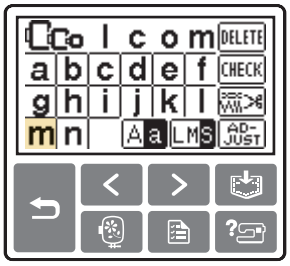


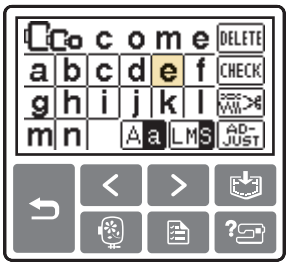












Memo

- The character pattern that you created can be saved for later use. For details, refer to “Saving patterns” (page 69).

Selecting a Baby Lock Exclusive pattern/embroidery pattern

There are total of 106 embroidery patterns, such as fruits and animals, saved in the machine's memory.

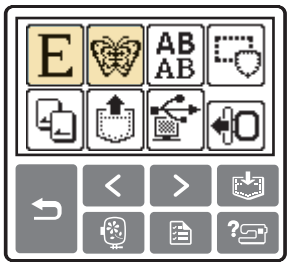
40 Baby Lock Exclusive patterns

66 Embroidery patterns

Memo

- Refer to “Embroidery Pattern Color Change Table“ in the Quick reference guide for samples of completed patterns and the thread used.

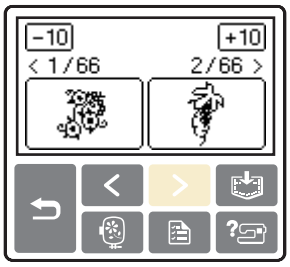
1 Select the type of the embroidery pattern.



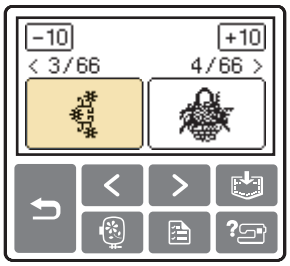
▶ The pattern selection screen is displayed.

2 Select the pattern.

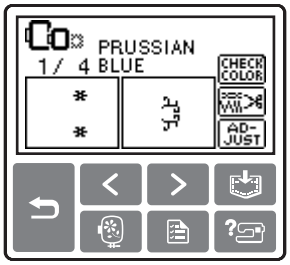
Switch the screen using [<] (Previous page key) and [>] (Next page key).



- When [-10]/[+10] is pressed, the display of patterns moves backward/forward 10 patterns.



▶ When a pattern is selected, it can be embroidered.



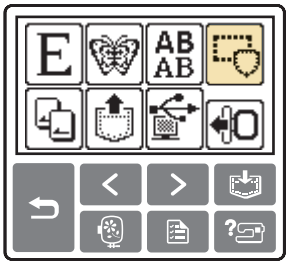
Selecting a frame pattern

10 shapes, such as squares and circles, can be combined with 12 stitch types.

Memo

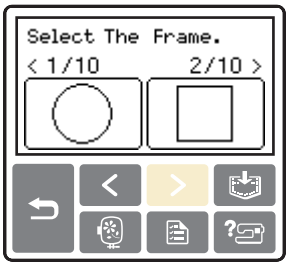
- Refer to “Frame patterns“ in the Quick reference guide for frame pattern shapes and stitches.

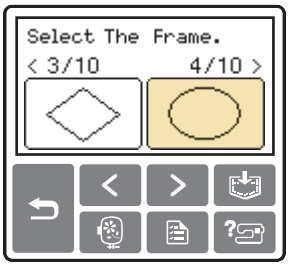
1 **Press the frame pattern.**



▶ The frame shape selection screen is displayed.

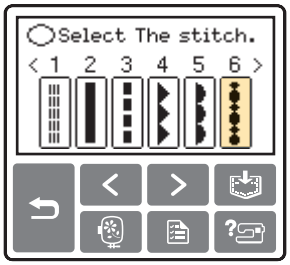
2 **Select the frame shape.**
Switch the screen using [<] (Previous page key) [>] (Next page key), and select from the ten types.



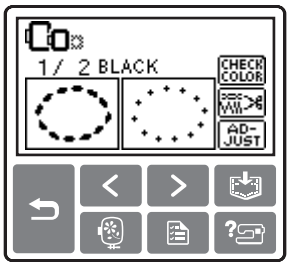


▶ The stitch selection screen is displayed.

3 **Select the stitch.**
Switch the screen using [<] (Previous page key) [>] (Next page key), and select from the 12 stitches.



▶ When a stitch is selected, it can be embroidered.



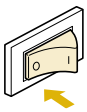
Using an embroidery card (sold separately)

If an embroidery card is used, you can embroider patterns other than the patterns saved in the machine. There are various cards with different themes.

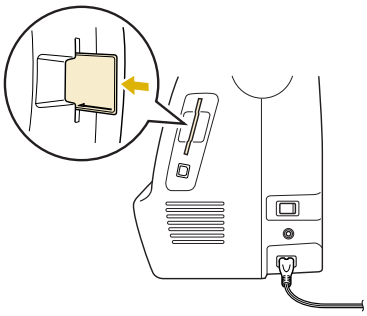
Note

- Always turn off the machine to insert and remove embroidery cards.
- Insert the embroidery card into the embroidery card slot, facing it in the right direction.
- Do not put anything other than an embroidery card in the embroidery card slot.
- When embroidery cards are not in use, keep them in their storage cases.
- Use only embroidery cards manufactured for this machine. Using unauthorized cards may cause your machine to operate incorrectly.
- Embroidery cards purchased in foreign countries may not work with your machine.
- Large patterns supplied on embroidery cards may be difficult to view on the screen.

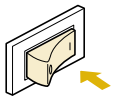
1 Turn off the machine.



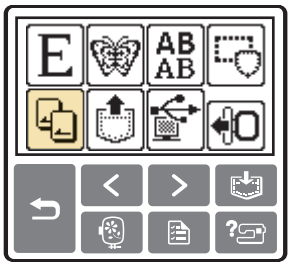
2 Insert the embroidery card in the embroidery card slot on the right side of the machine.
Face the arrow on the embroidery card toward you, and insert it in the direction of the arrow.



3 Turn on the machine.

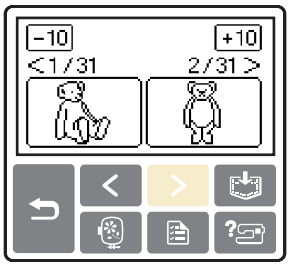


4 Press the embroidery card on the screen.



▶ The selection screen for the patterns saved in the card is displayed.

5 Select a pattern.
The operation is the same as in “Selecting Embroidery Patterns” (page 50).



Embroidering

After the preparations are done, you can try embroidering. This section describes the steps for embroidering and appliquéing.

Embroidering attractive finishes

There are many factors that go into sewing beautiful embroidery. Using the appropriate stabilizer (page 44) and hooping the fabric in the frame (page 45) are two important factors mentioned earlier. Another important point is the appropriateness of the needle and thread being used. See the explanation of threads below. Follow the explanation below.

Thread	**Upper thread**	Use embroidery thread, or country embroidery thread intended for use with this machine. Other embroidery threads may not yield optimum results.
	Bobbin thread	Use poly 90 weight bobbin thread which is intended for use with this machine (page 9).

Note

- Before embroidering, check that there is enough thread in the bobbin. If you continue embroidering without enough thread in the bobbin, the thread may tangle.
- Do not leave objects in the range of motion of the embroidery frame. The frame may strike the object and cause a poor finish to the embroidery pattern.
- When embroidering on large garments (especially jackets or other heavy fabrics), do not let the fabric hang over the table. Otherwise, the embroidery unit cannot move freely, and the pattern may not turn out as planned.

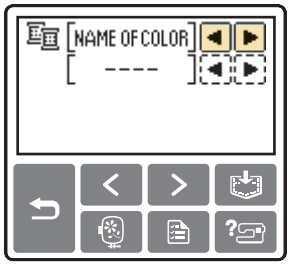
Embroidering a pattern

Embroidery patterns are embroidered with a change of thread after each color.

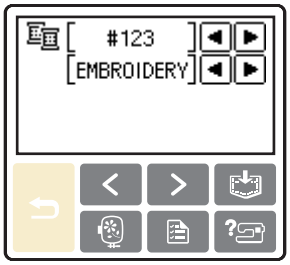
1 Prepare embroidery thread of the color shown on the screen.

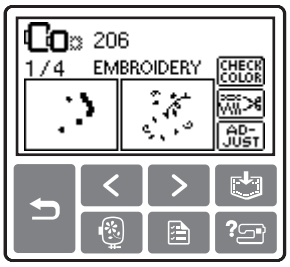
① Embroidery frames that can be used for embroidering
② Current color step/Number of colors in design
③ Current name of color
④ Current color part
⑤ Next color part

- The thread color number set displayed for the thread colors can be changed. Press Settings / (Settings key), and then change the setting in the settings screen. For details, refer to “LCD (liquid crystal display) operation” (page 51).

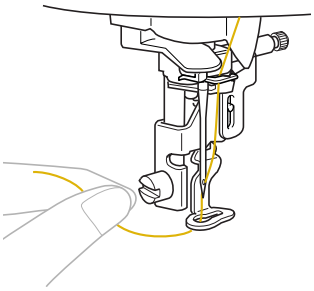


☐ **Example:** Embroidery thread number selected





2 Set the embroidery thread, and thread the needle, then pass the thread through the embroidery foot hole, and hold it lightly in your left hand.
Give the thread a little slack.



- Refer to “Threading the upper thread” (page 32) and “Threading the needle” (page 34).

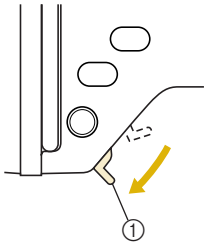
Note

- Before using the needle threader, be sure to lower the presser foot.

CAUTION

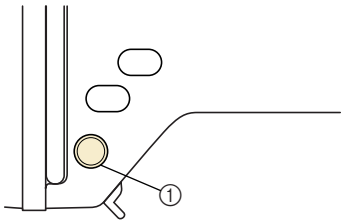
- **If the thread is pulled too tight, the needle may break or bend.**
- **Do not let hands or objects hit the carriage while embroidering. The pattern may misalign.**

3 **Lower the presser foot lever.**



① Presser foot lever

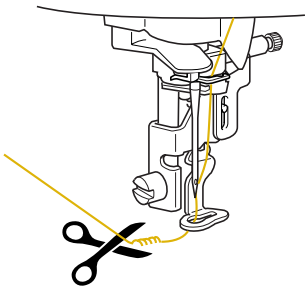
4 **Press START/STOP / ↑ ("Start/Stop" button).**



① "Start/Stop" button

5 **After progressing 5-6 stitches, press START/STOP / ↑ ("Start/Stop" button) to stop the machine.**

6 **Use scissors to cut the thread at the beginning of the stitching.**
Cut the thread at the edge of the stitching.



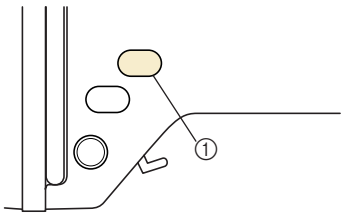
- If the thread is left at the beginning of the stitching, it may be sewn over as you continue embroidering the pattern, making it very difficult to deal with the thread after the pattern is finished. Trim the thread at the beginning.

7 **Press START/STOP / ↑ ("Start/Stop" button) again.**

▶ The embroidery begins again.

▶ Stitching stops automatically with reinforcement after one color has been completed. When automatic thread cutting is set, the thread is cut.

8 **Press ✂ ("Thread Cutter" button) once.**



① "Thread Cutter" button

▶ The needle is raised and the threads are cut.

CAUTION

- **Do not press ✂ (Thread cutter button) after threads have already been cut, otherwise the needle may break, the threads may become tangled or damage to the machine may occur.**
- **Do not press ✂ (Thread cutter button) if there is no fabric under the embroidery foot or while the machine is embroidering, otherwise damage to the machine may occur.**

9 **Set up embroidery thread for the next color, and repeat steps 1 through 8.**

10 **Cut the excess thread.**

▶ When the last color is embroidered, "Finished sewing." will appear on the display. Press OK, and the display will return to the initial screen.

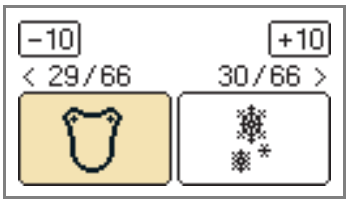
Memo

- For the automatic cutting setting, refer to "LCD (liquid crystal display) operation" (page 51).

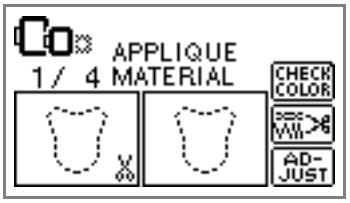
Appliquéing

Prepare the base fabric and the appliqué fabric (appliqué piece). Press Settings / (Settings key), and set the thread color display to NAME OF COLOR, so "APPLIQUE MATERIAL", "APPLIQUE POSITION" and "APPLIQUE" are displayed on the screen.

1 Select an appliqué pattern.

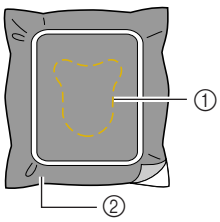


2 When "APPLIQUE MATERIAL" is displayed on the screen, apply iron-on stabilizer to the back of the appliqué piece fabric, and stretch it on the embroidery frame.



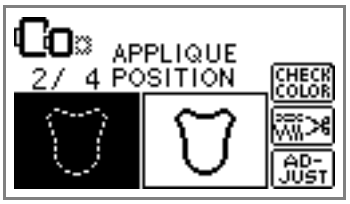
3 Lower the presser foot lever, and press / ("Start/Stop" button).

▶ The cut-out for the appliqué piece is sewn, and the machine stops.

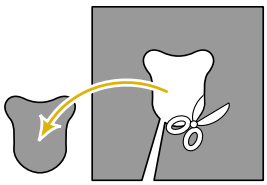


① Cut-out line
② Appliqué piece fabric

▶ "APPLIQUE POSITION" will be displayed on the screen.



4 Remove the fabric from the embroidery frame, and cut it out along the cut-out line.
Cut carefully along the stitching and remove the thread.



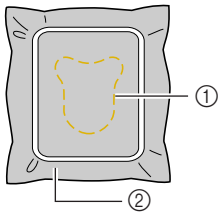
- If it is not cut right on the stitching, it will not be finished neatly.

5 Stretch the base fabric on the embroidery frame.

6 Set up the thread for appliquéing.

7 Lower the presser foot lever, and press / ("Start/Stop" button).

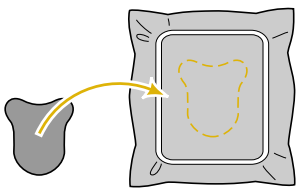
▶ The position for the appliqué is stitched, and the machine stops.



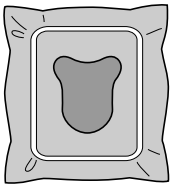
① Appliqué position
② Base fabric

▶ "APPLIQUE" will be displayed on the screen.

8 Apply a thin layer of fabric glue or spray adhesive to the back of the appliqué piece, and attach it in the appliqué position.



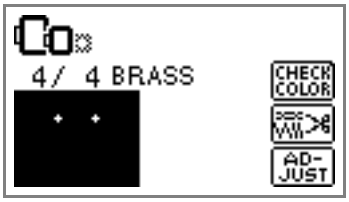
9 **Lower the presser foot lever, and press / (“Start/Stop” button).**

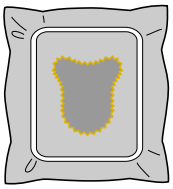


Note

- When “APPLIQUE MATERIAL”, “APPLIQUE POSITION” and “APPLIQUE” are displayed, a specific color thread does not appear. Use a proper color thread to match the appliqué piece.

10 **Follow the instructions on the screen, and change thread colors as you embroider.**





Editing Patterns

This section describes ways to edit, adjust, and reposition patterns.

Adjusting the layout

The pattern is normally positioned in the center of the embroidery frame.
You can check the layout before starting embroidery and change the position and the size.

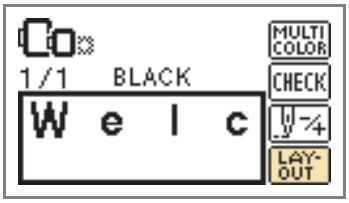
Memo

- Keys that appear surrounded with a dotted line cannot be used.

1 **After selecting the embroidery pattern, press [ADJUST].**

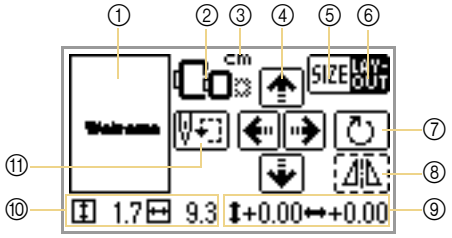
▶ The embroidery screen is displayed.

2 **Press [LAY-OUT].**



▶ The layout screen is displayed.

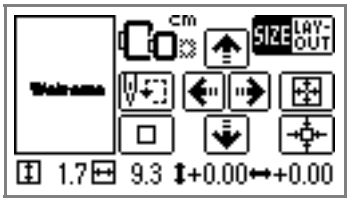
3 **Check and adjust the layout.**



① Layout within the frame
② Available embroidery frames
③ Display unit (cm/INCH)
④ Change position keys
⑤ Size key
⑥ Layout key
⑦ Rotation key
⑧ Horizontal mirror image key
⑨ Distance from the center
⑩ Embroidery size
⑪ Starting point key

Embroidery frame size
These flash if the pattern was resized, the layout was adjusted, or the recommended embroidery frame size was changed. Embroidery frame icons that appear in gray cannot be used.

Size key
Increases/decreases the size of the pattern. Press [LAY-OUT] to return to the previous screen.



Decreases size

Returns to original size
Returns to center position (when the pattern was moved with the change position key)

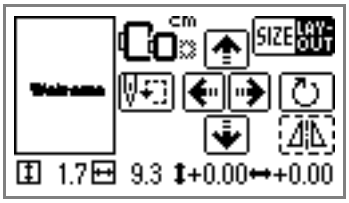
Increases size

Change position keys
Moves the embroidery position up, down, left and right.

Memo

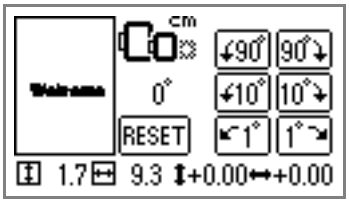
- If you make a note of the values in the lower part of screen when you change the size and position, you can embroider with the same size and layout even if you have to turn the power back on in the middle of your work.

Layout key
Press this key to move to rotation screen.



Rotation key
Rotates the pattern one degree, 10 degrees or 90 degrees at a time.

- Press (Back key) to return to the previous screen.



Rotates the pattern 90 degrees to the left

Rotates the pattern 90 degrees to the right

Rotates the pattern 10 degrees to the left

Rotates the pattern 10 degrees to the right

Rotates the pattern 1 degree to the left

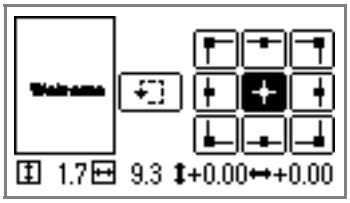
Rotates the pattern 1 degree to the right

Returns the pattern to its original position

Horizontal mirror image key
Mirrors the pattern left and right.

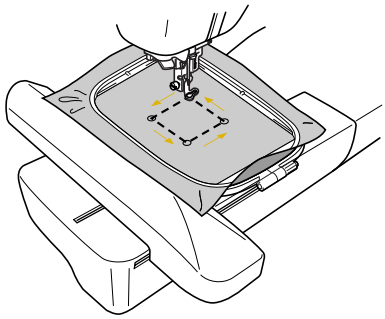
Starting point key
Moves the needle start position to align the needle with the pattern position.

- Press to return to the previous screen.



Moves the needle to the position of the selected needle start position.

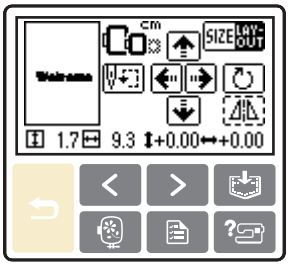
Moves the frame to check the pattern position.



CAUTION

- **Never lower the needle when the embroidery frame is moving. The needle may break or bend.**
- **When you have revised the pattern, check the display of available embroidery frames and use an appropriate frame. If you use an embroidery frame not displayed as available for use, the presser foot may strike the frame and possibly cause injury.**

- **Press [Back key] (Back key) to return to the original screen.**

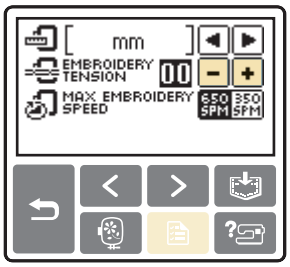


Memo

- When the power is turned off, the layout returns to the original setting.
- You can also check the pattern size and distance from the center by pressing [LAY-OUT] after beginning embroidering.

Adjusting the thread tension

If embroidery fails, it is difficult to undo the thread and the fabric may be damaged. Before embroidering, use a scrap of the same fabric to check the adjustment of the thread tension, etc.
To adjust the thread tension, press [Settings]/[ ] (Settings key).



Press [−] to weaken the thread tension.
Press [+] to tighten the thread tension.

■ Correct thread tension

The thread tension is correct when upper thread is just visible on back of the fabric.

① Right side
② Wrong side

■ Upper thread is too tight

The lower thread will be visible on the front of the fabric. In this instance, decrease the upper thread tension.

① Right side
② Wrong side

■ Upper thread is too loose

The upper thread has slack. In this instance, increase the upper thread tension.

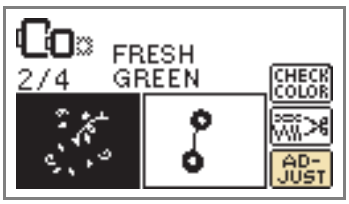
① Right side
② Wrong side

Resewing

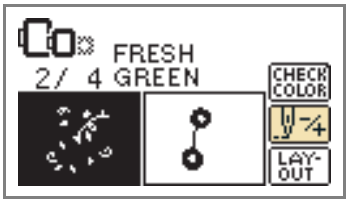
When the wrong upper thread color has been sewn, it can be resewn with the correct color.

1. **Press / ("Start/Stop" button) to stop the machine.**

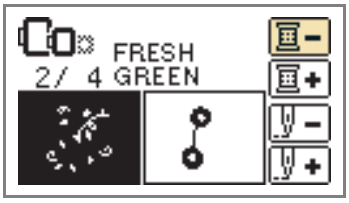
2. **Press .**



3. **Press .**



4. **Press (Back one color) to return to the beginning of the mistaken color.**



5. **Set up the correct color for the upper thread.**

6. **Press / ("Start/Stop" button) to continue the design.**

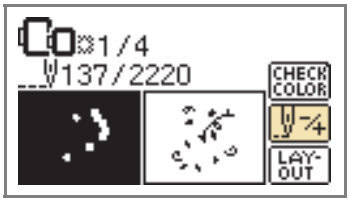
Thread runs out partway through a design

When the upper thread or the bobbin thread runs out while embroidering, the machine stops. Move the needle back about 10 stitches and resume embroidering.

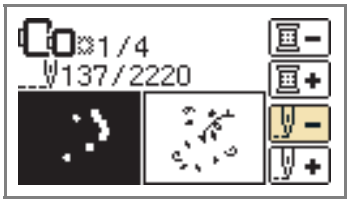
1. **Set up the upper or bobbin thread.**

2. **Press .**

3. **Press .**



4. **Press (Back one stitch) to move the needle back about 10 stitches.**
(Forward one stitch) increases the stitch number.



5. **Restart the embroidery.**

2

Stopping while embroidering

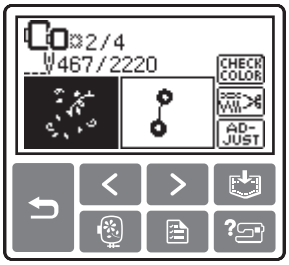
If the embroidery is stopped before it is complete, check the current needle count before turning off the machine.

Memo

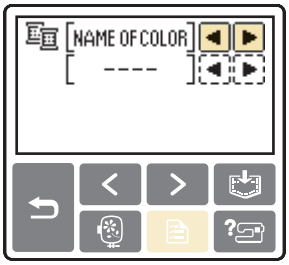
- When the machine is turned off, the embroidery size and layout return to the original setting.

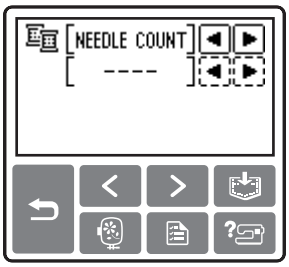
1. **Press / (“Start/Stop” button) to stop the machine.**

2. **Check the current needle count on the screen and make a note of it.**



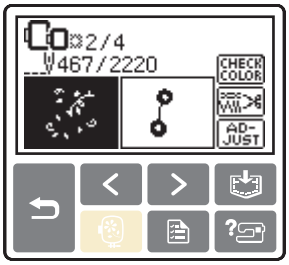
If the needle count is not displayed, press Settings / (Settings key), and then use ◀ ▶ to display the following screen.





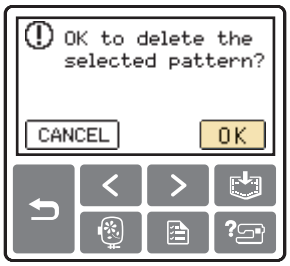
- Press ⮌ (Back key) to return to the embroidery screen.

3. **Press Embroidery / (Embroidery key).**



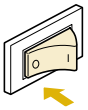
▶ The confirmation message is displayed.

4. **Press OK .**



▶ The selected pattern is deleted, and the screen for selecting the embroidery pattern type is displayed.

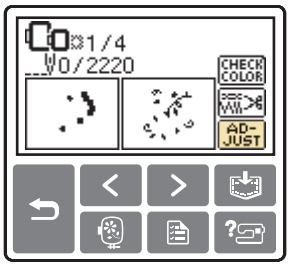
5. **Turn off the machine.**



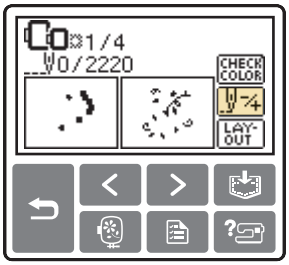
- Always detach the embroidery unit when you move the machine.

6. **Turn on the machine and select the pattern.**

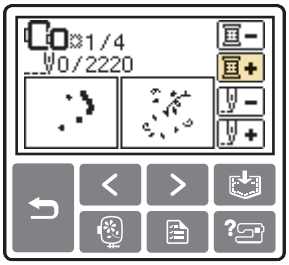
7. **Press AD-JUST .**



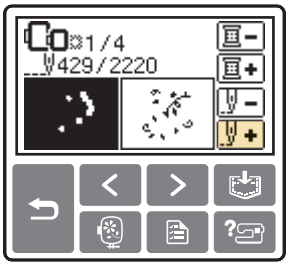
8 **Press [Y-4].**



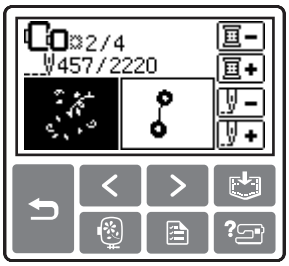
9 **Press [+] (Forward one color) to move to the beginning of the color you want to embroider.**



10 **Press [Y+] (Forward one stitch) to increase the needle count.**
If [Y+] is pressed continuously, it moves forward 1 → 9 → 30 stitches.



Move forward to about 10 stitches before the total number of stitches confirmed in 2.



11 **Restart the embroidery.**

Using the Memory Function

Embroidery data precautions

Observe the following precautions when using embroidery data other than that created and saved in this machine.

⚠ CAUTION

- **When using embroidery data other than our original patterns, the thread or needle may break when embroidering with a stitch density that is too fine or when embroidering three or more overlapping stitches. In that case, use one of our original data design systems to edit the embroidery data.**

■ **Types of Embroidery Data that can be Used**

- Only .pes and .dst embroidery data files can be used with this machine. Using data other than that saved using our data design systems or machines may cause the embroidery machine to malfunction.

■ **Computers and Operating Systems with the Following Specifications can be Used**

- Compatible models:
  IBM PC with a USB port as standard equipment
  IBM PC-compatible computer equipped with a USB port as standard equipment
- Compatible operating systems:
  Microsoft Windows Me/2000/XP/Vista
  (Windows 98SE requires a driver. Download the driver from our web site (www.babylock.com).)

■ **Precautions on Using the Computer to Create and Save Data**

- If the file name of embroidery data cannot be identified, for example, because the name contains special characters, the file is not displayed. If this occurs, change the name of the file. We recommend using the 26 letters of the alphabet (uppercase and lowercase), the numbers 0 through 9, "-", and "_".
- If .pes embroidery data larger than 18 cm (H) × 13 cm (W) is selected, a message appears asking if you wish to rotate the pattern 90 degrees.
  Embroidery data larger than 18 cm (H) × 13 cm (W), even after being rotated 90 degrees, cannot be used (All designs must be within the 18 cm (H) × 13 cm (W) design field size.)
- .pes files saved with the number of stitches, the number of colors and the number of combined patterns exceeding the specified limits cannot be displayed. Use one of our original data design systems to edit the embroidery pattern so that it meets the specifications.
- Do not create folders in "Removable Disk" on a computer. If embroidery data is stored in a folder in "Removable Disk", that embroidery data cannot be retrieved by the machine.
- Even if the embroidery unit is not attached, the machine will manage embroidery data.

■ **Tajima (.dst) Embroidery Data**

- .dst data is displayed in the pattern list screen by file name (the actual image cannot be displayed). Only the first eight characters of the file name can be displayed.
- Since Tajima (.dst) data does not contain specific thread color information, it is displayed with our default thread color sequence. Check the preview and change the thread colors as desired.

■ **Trademarks**

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Saving patterns

The embroidery patterns and the alphabet characters you have customized can be saved in the machine's memory.
Since the saved patterns will not be erased when the power is turned off, you can always retrieve them for embroidery. This is convenient for saving names and the like. You can save up to 12 patterns or 512 KB of data.

■ Saving a pattern

① After selecting the pattern to be saved, press Memory / (Memory key).

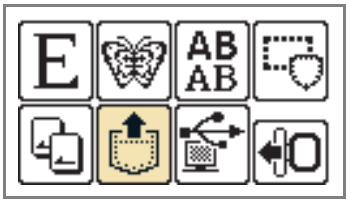
▶ After the pattern is saved, the initial screen appears again.

Note

- Do not turn off the machine while the pattern is being saved, otherwise the pattern data may be lost.

■ Retrieving a pattern.

① Press .



▶ The saved patterns are displayed.

② Select the pattern you wish to retrieve.

Switch screens using < (Previous page key) and > (Next page key).

① Total amount of memory used
② Total amount of memory space
③ Number of the currently displayed page from the total number of pages

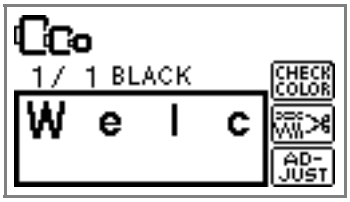
▶ The selected pattern is shown in reverse highlighting.

③ Press .

To delete the saved pattern, press DELETE.

▶ The saved pattern is retrieved.

▶ The embroidery screen appears, and you can embroider the retrieved pattern.

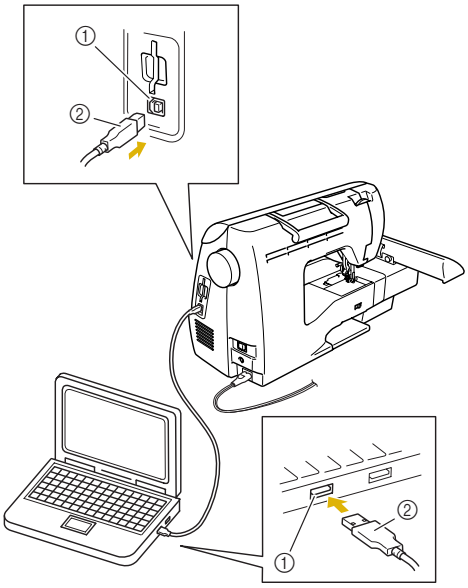


Note

- Characters saved from an embroidery card must have the embroidery card inserted in the machine in order to retrieve the memory saved from the embroidery card.

Retrieving embroidery patterns from the computer

1 **Plug the USB cable connectors into the corresponding USB port connectors on the computer and on the machine.**

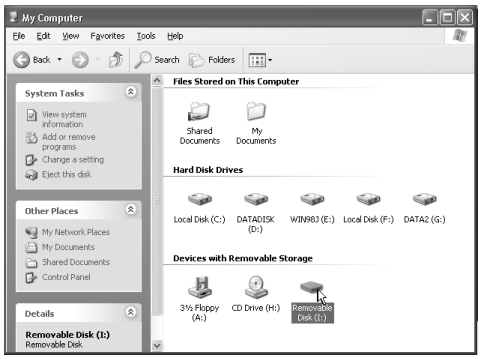


① USB port connector for computer
② USB cable connector

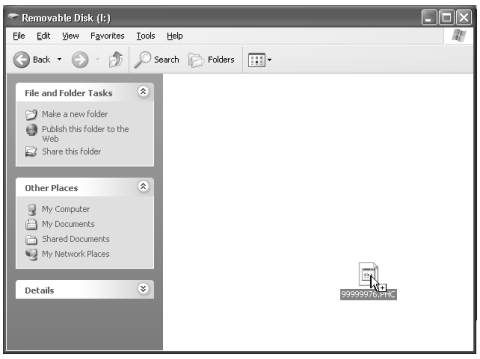
Memo

- The USB cable can be plugged into the USB port connectors on the computer and machine whether or not they are turned on.

2 **The “Removable Disk” icon appears in “My Computer” on the computer.**



3 **Copy the pattern data to “Removable Disk”.**

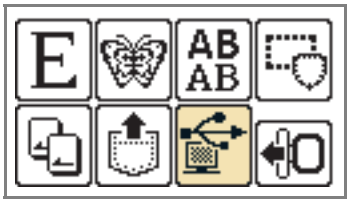


▶ Pattern data in “Removable Disk” is written to the machine.

Note

- While data is being written, do not disconnect the USB cable.
- Do not create folders within “Removable Disk”. Since folders are not displayed, pattern data within folders cannot be retrieved.
- While the machine is embroidering, do not write data to or delete data from “Removable Disk”.

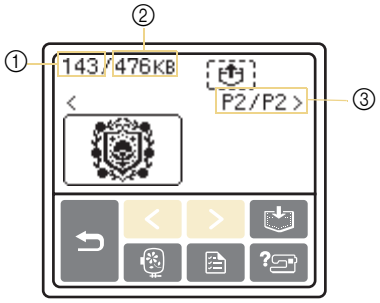
4 **Press** **.**



▶ The saved patterns are displayed.

5 **Select the pattern you wish to retrieve.**

Switch screens using [<] (Previous page key) and [>] (Next page key).



① Total amount of memory used
② Total amount of memory space
③ Number of the currently displayed page from the total number of pages

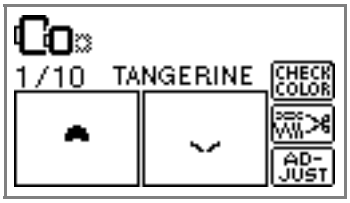
▶ The selected pattern is shown in reverse highlighting.

6 **Press [📂].**

▶ The saved pattern is retrieved.

▶ The embroidery screen appears, and you can embroider the retrieved pattern.

7 **Adjust the pattern as desired, and then begin embroidering.**



Note

- If there are 13 or more patterns saved in “Removable Disk”, the patterns cannot be displayed. When the message “Reduce the number of patterns. Only up to 12 patterns can be handled.” appears, delete patterns from “Removable Disk” so that it contains no more than 12 patterns. Then, close the error message, repeat the procedure starting from step 4 and then press [📂] to retrieve the pattern.
- If patterns copied to “Removable Disk” are not saved in the machine's memory, their data is lost when the machine is turned off. In order to retrieving patterns directly from the machine the next time that they are needed, save the data in the machine's memory before turning off the machine. For details, refer to “Saving patterns” (page 69).

3 APPENDIX

The various maintenance and troubleshooting procedures are described in this chapter.

Care and Maintenance **74**
- **Cleaning the machine surface** **74**
- **Cleaning the race** **74**
- **Cleaning the bobbin case** **75**

Attaching the Embroidery Foot **76**
- **Attaching the embroidery foot "Q"** **76**

Troubleshooting **78**
- **Error messages** **82**
- **Adjusting the LCD** **84**
- **Operation beep** **84**
- **Canceling the operation beep** **85**

Upgrading Your Machine's Software **86**

Index **87**

Care and Maintenance

Simple machine maintenance operations are described below.

Cleaning the machine surface

If the surface of the machine is dirty, lightly soak a cloth in neutral detergent, squeeze it out firmly, and then wipe the surface of the machine. After cleaning it once with a damp cloth, wipe it again with a dry cloth.

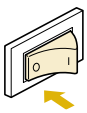
CAUTION

- **Unplug the power cord before cleaning the machine, otherwise injuries or an electric shock may occur.**

Cleaning the race

Embroidery performance will suffer if dust collects in the bobbin case, therefore, it should be cleaned periodically.

1. **Turn off the machine.**



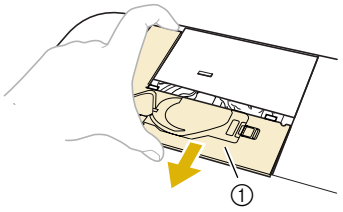
2. **Unplug the power cord from the power supply receptacle on the right side of the machine.**

CAUTION

- **Unplug the power cord before cleaning the machine, otherwise injuries or an electric shock may occur.**

3. **Remove the embroidery unit.**

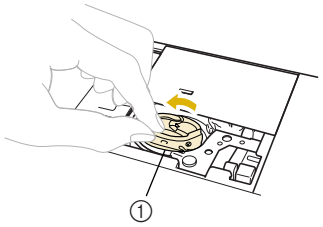
4. **Grasp both sides of the needle plate cover, and then slide it toward you.**



① Needle plate cover

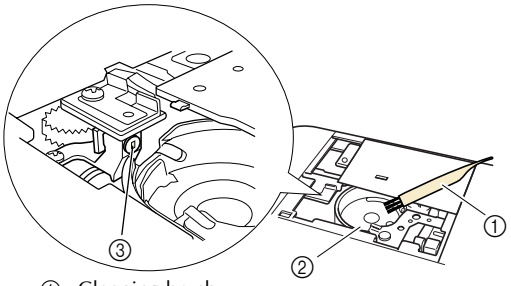
▶ The needle plate cover is removed.

5. **Remove the bobbin case.**
Grasp the bobbin case, and then pull it out.



① Bobbin case

6. **Use the cleaning brush or a vacuum cleaner to remove any lint and dust from the race and bobbin thread sensor and their surrounding area.**



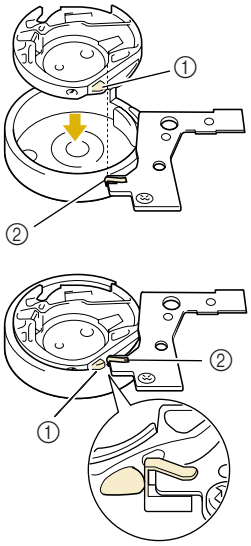
① Cleaning brush
② Race
③ Bobbin thread sensor

- Do not apply oil to the bobbin case.

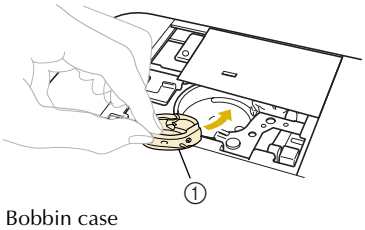
Note

- If lint or dust collects on the bobbin thread sensor, the sensor may not operate correctly.

7 Insert the bobbin case so that the projection on the bobbin case aligns with the spring.

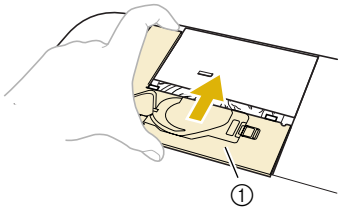


① Projection
② Spring



① Bobbin case

8 Insert the tabs on the needle plate cover into the needle plate, and then slide the cover back on.



① Needle plate cover

CAUTION

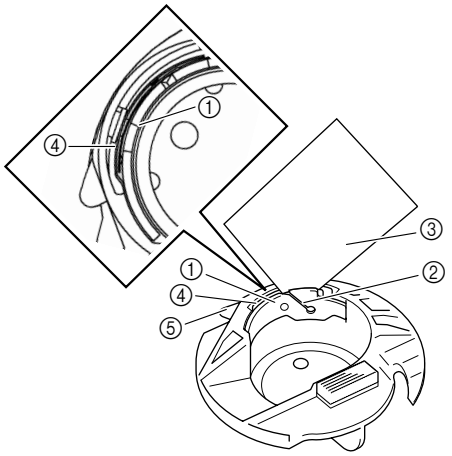
- **Never use a bobbin case that is scratched, otherwise the upper thread may become tangled, the needle may break or embroidering performance may suffer. For a new bobbin case (part code: XD1855-051), contact your nearest authorized service center.**
- **Be sure that the bobbin case is correctly installed, otherwise the needle may break.**

Cleaning the bobbin case

Thread wax and dust easily collect around the notch in the tension spring on the bobbin case, resulting in an incorrect thread tension. Therefore, the bobbin case should be cleaned as necessary should tension problems arise. When cleaning the bobbin case, use business card stock or another type of paper of similar thickness and sturdiness in order to prevent pieces of paper tearing off and getting lodged in the bobbin case.

1 Follow steps to remove bobbin case ① through ⑤ of "Cleaning the race" (page 74).

2 Using a piece of paper of adequate thickness and sturdiness, slide the paper between the tension plate base and the tension spring and also slide the paper behind the notch of the spring to remove any dirt or dust.



① Tension plate base
② Notch
③ Paper (e.g. business card type)
④ Tension spring
⑤ Bobbin case projection (stopper)

Memo

- Do not bend the tension spring. In addition, do not use anything other than recommended paper to clean the bobbin case.

3 Use the enclosed cleaning brush to remove any lint and dust from inside the bobbin case.

4 Reinsert the bobbin case and needle plate cover assuring the bobbin case projection (stopper) is touching the bracket spring.

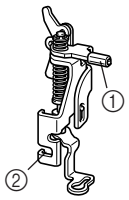
- Refer to steps 7 and 8 of "Cleaning the race" (page 75).

Attaching the Embroidery Foot

This section describes how to attach the embroidery foot.

Attaching the embroidery foot “Q”

Attach the embroidery foot when embroidering. Have the included embroidery foot “Q” and a screwdriver ready.

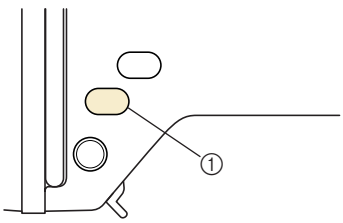


① Embroidery foot bar
② Caught by the presser foot holder screw

CAUTION

- **Always use the embroidery foot “Q” when embroidering. If the wrong presser foot is used, the needle may hit the presser foot and break or bend.**

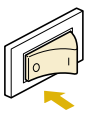
1 **Press (“Needle Position” button) once or twice to raise the needle.**



① “Needle Position” button

▶ The needle goes up.

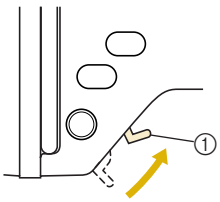
2 **Turn off the machine.**



CAUTION

- **Before replacing the embroidery foot, be sure to turn off the machine, otherwise injuries may occur if / (“Start/Stop” button) is accidentally pressed and the machine starts embroidering.**

3 **Raise the presser foot lever.**



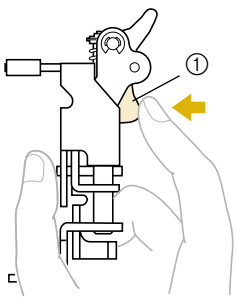
① Presser foot lever

▶ The presser foot is raised.

- At the time of purchase, the presser foot lever is up.

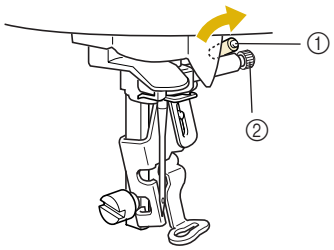
4 **Hold the embroidery foot with your right hand, as shown.**

Hold the embroidery foot with your index finger wrapped around the lever at the back of the foot.



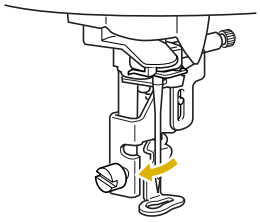
① Lever

5 **While pressing in the lever with your finger, fit the embroidery foot bar over the needle clamp screw to attach the embroidery foot to the presser foot bar.**

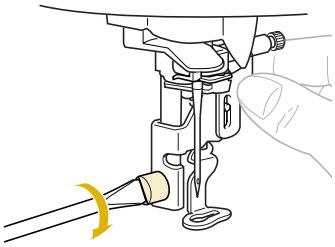


① Embroidery foot bar
② Needle clamp screw

6 **Secure the embroidery foot with the presser foot holder screw.**
Set the embroidery foot perpendicular.



7 **Firmly tighten the presser foot holder screw.**
Turn the screwdriver toward the front.



CAUTION

- **Do not hit the needle with your finger or the embroidery foot "Q" when attaching it. The needle may break or cause injury.**
- **Be sure to tighten the screw with the included screwdriver. If the screw is loose, the needle may hit the presser foot and break or bend.**
- **Before embroidering, always turn the handwheel toward you (counterclockwise) slowly to make sure that the needle does not hit the presser foot. Otherwise, the needle may break or bend.**

Troubleshooting

If the machine stops operating correctly, check the following possible problems before requesting service. If the problem persists, contact your retailer or the nearest authorized service center.

Symptom	Probable Cause	Remedy	Reference
The machine does not operate.	The machine is not turned on.	Turn on the machine.	page 21
	The “Start/Stop” button was not pressed.	Press the “Start/Stop” button.	page 59
	The presser foot lever is raised.	Lower the presser foot lever.	page 59
	The embroidery unit is not attached on the machine.	Attach the embroidery unit.	page 17
The needle breaks.	The needle is incorrectly installed.	Correctly install the needle.	page 38
	The needle clamp screw is loose.	Use the screwdriver to firmly tighten the screw.	
	The needle is bent or blunt.	Replace the needle.	
	The upper thread tension is too tight.	Loosen the upper thread tension.	page 64
	The spool is incorrectly installed.	Correctly install the spool.	page 31
	The area around the hole in the needle plate is scratched, or has a burr on it.	Replace the needle plate. Contact your retailer or the nearest authorized service center.	–
	The area around the hole in the presser foot is scratched, or has a burr on it.	Replace the presser foot. Contact your retailer or the nearest authorized service center.	–
	The bobbin case is scratched, or has a burr on it.	Replace the bobbin case. Contact your retailer or the nearest authorized service center.	–
	A bobbin designed specifically for this machine is not used.	Incorrect bobbins will not work properly. Only use a bobbin designed specifically for this machine.	page 26

Symptom	Probable Cause	Remedy	Reference
The upper thread breaks.	The upper thread was not threaded correctly (for example, the spool is not installed correctly, the spool cap is too big for the spool being used, or the thread has come out of the needle bar thread guide).	Correct the upper threading.	page 31
	There are knots or tangles in the thread.	Remove any knots or tangles.	–
	The upper thread tension is too tight.	Loosen the upper thread tension.	page 64
	The thread is tangled, for example, in the bobbin case.	Remove the tangled thread. If the thread is tangled in the bobbin case, clean the race and the bobbin case.	page 74, page 75
	The needle is bent or blunt.	Replace the needle.	page 38
	The needle is incorrectly installed.	Correctly install the needle.	
	The area around the hole in the needle plate is scratched, or has a burr on it.	Replace the needle plate. Contact your retailer or the nearest authorized service center.	–
	The area around the hole in the presser foot is scratched, or has a burr on it.	Replace the presser foot. Contact your retailer or the nearest authorized service center.	–
	The bobbin case is scratched, or has a burr on it.	Replace the bobbin case. Contact your retailer or the nearest authorized service center.	–
	A bobbin designed specifically for this machine is not used.	Incorrect bobbins will not work properly. Only use a bobbin designed specifically for this machine.	page 26
Bobbin thread does not wind neatly on the bobbin.	The thread that was pulled out was not wound onto the bobbin correctly.	Wind the thread that was pulled off around the bobbin five or six times clockwise.	page 28
The lower thread is tangled or breaks.	The bobbin thread is incorrectly installed.	Correctly install the bobbin thread.	page 29
	The bobbin is scratched or does not rotate smoothly, or has a burr on it.	Replace the bobbin.	–
	The thread is tangled.	Remove the tangled thread and clean the race and the bobbin case.	page 74, page 75
	A bobbin designed specifically for this machine is not used.	Incorrect bobbins will not work properly. Only use a bobbin designed specifically for this machine.	page 26

Symptom	Probable Cause	Remedy	Reference
The thread tension is incorrect.	The upper thread was not threaded correctly.	Correct the upper threading.	page 31
	The bobbin thread is incorrectly installed.	Correctly install the bobbin thread.	page 29
	The thread tension is incorrect.	Adjust the tension of the upper thread.	page 64
	A bobbin designed specifically for this machine is not used.	Incorrect bobbins will not work properly. Only use a bobbin designed specifically for this machine.	page 26
Stitches are skipped.	The upper thread was not threaded correctly.	Correct the upper threading.	page 31
	The needle is bent or blunt.	Replace the needle.	page 38
	The needle is incorrectly installed.	Correctly install the needle.	page 38
	Dust has accumulated under the needle plate or in the bobbin case.	Remove the needle plate cover and clean the race and the bobbin case.	page 74, page 75
A high-pitched noise is made while embroidering.	Dust has accumulated in the feed dogs or in the bobbin case.	Clean the race and the bobbin case.	page 74, page 75
	The upper thread was not threaded correctly.	Correct the upper threading.	page 31
	The bobbin case is scratched, or has a burr on it.	Replace the bobbin case. Contact your retailer or the nearest authorized service center.	–
	A bobbin designed specifically for this machine is not used.	Incorrect bobbins will not work properly. Only use a bobbin designed specifically for this machine.	page 26
The thread does not pass through the eye of the needle.	The needle has not been raised to the correct position.	Press the “Needle Position” button.	page 32
	The needle is incorrectly installed.	Correctly install the needle.	page 38
The stitch is not sewn correctly.	The thread tension is incorrect.	Adjust the tension of the upper thread.	page 64
	The thread is tangled, for example, in the bobbin case.	Remove the tangle thread. If the thread is tangled in the bobbin case, clean the race and the bobbin case.	page 74, page 75
The lamp does not come on.	The lamp is damaged.	Contact your retailer or the nearest authorized service center.	–
	The machine is not turned on.	Turn on the machine.	page 21
Nothing appears in the LCD.	The brightness of the LCD is either too light or too dark.	Adjust the brightness of the LCD.	page 84

Symptom	Probable Cause	Remedy	Reference
Machine does not operate when button is pressed.	An animation is displayed on the LCD.	Touch the LCD with your finger, and the animation will disappear.	page 22
Embroidery unit does not move.	No pattern selected.	Select a pattern.	page 50
	The embroidery unit is not set up correctly.	Set the embroidery unit up correctly.	page 17
Embroidering continues although the bobbin thread ran out.	Dust has collected on the bobbin thread sensor.	Remove any dust from the bobbin thread sensor.	page 74
Embroidery not neatly done.	The fabric is not fully stretched on the embroidery frame. The fabric is loose.	Stretch the fabric properly on the embroidery frame.	page 45
	No stabilizer material is attached.	Always use stabilizer material for embroidery with stretch fabrics, thin fabrics, fabrics with a loose weave and fabrics where stitches easily contract.	page 44
	The thread is tangled and the bobbin case, etc., is plugged up.	Remove the tangled thread. When the bobbin case is plugged up, clean the race and the bobbin case.	page 74, page 75
	The thread tension is incorrect.	Adjust the tension of the upper thread.	page 64
	Objects are placed near the carriage or embroidery frame.	If the embroidery unit carriage or embroidery frame bumps into objects, the pattern will be misaligned. Do not place objects within the range of embroidery frame motion.	page 18
	Material coming out of the embroidery frame is causing problems.	Stretch the fabric on the frame once again so that the material coming out of the embroidery frame does not cause problems, rotate the pattern and embroider.	–
	A heavy fabric is being embroidered, and the fabric is hanging off the table.	If embroidery is done with the fabric hanging off the table, the embroidery unit movement will be impaired. Support the fabric while embroidering.	–
	The fabric is catching. It is pinched.	Stop the machine and set the fabric up correctly.	–
	The carriage was moved while the embroidery frame was being removed or attached during embroidery.	If the carriage is moved during the process, the pattern may be misaligned. Be careful when removing or attaching the embroidery frame.	–

Error messages

When erroneous operations are performed messages and advice on operation will be displayed on the LCD. Follow what is displayed. The message may disappear if the operation is performed correctly. The message will disappear if CLOSE is pressed while the message is displayed.

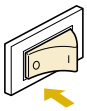
Error Message	Probable Cause
ⓘ Can not recognize the data. The data may be corrupted.	There is a possibility that the data for the selected pattern is corrupted.
ⓘ Cannot sew on this screen.	Either the “Start/Stop” button was pressed at a screen other than the embroidery screen.
ⓘ Check and rethread the upper thread.	Upper thread broken. Upper thread not set up correctly. Upper thread has run out. **CAUTION** **Be sure to rethread the machine. If you press the “Start/Stop” button without rethreading the machine, the thread tension may be wrong or the needle may break and cause injury.**
Deleting...	The machine is deleting a previously saved pattern.
ⓘ Do not send a USB transmittion while embroidering.	While embroidering, data is written to the “Removable Disk” in the connected computer or data is deleted from the “Removable Disk”.
ⓘ Insert an embroidery card.	on the LCD was pressed when no card was inserted.
ⓘ Lower the presser foot lever.	The “Start/Stop” button or “Thread Cutter” button was pressed while the embroidery foot was raised.
ⓘ Not enough available memory. Delete another pattern?	The memory is full and the stitch or pattern cannot be saved.
ⓘ OK to delete the selected pattern?	You pressed the back key or the embroidery key while a pattern was selected.
ⓘ Press the needle position button to raise the needle.	You tried to select an embroidery pattern or change the layout when the needle was down. The machine is turned on while the needle is lowered and the embroidery unit is attached.
ⓘ Raise presser foot lever.	This message is displayed when the embroidery unit is trying to initialize while the embroidery foot is lowered.
ⓘ Reduce the number of patterns. Only up to 12 patterns can be handled.	When 13 or more patterns are in “Removable Disk”, a pattern was being retrieved.

Error Message	Probable Cause
Retrieving the pattern. Wait a moment.	Retrieving the pattern
Return the bobbin winding shaft to left.	The “Needle Position” button or “Thread Cutter” button was pressed while the bobbin winder shaft is moved to the right.
Saving...	A pattern is being saved.
Select a pattern.	The “Start/Stop” button was pressed when no pattern is selected.
The bobbin thread is running out.	Bobbin thread has run out. Little bobbin thread remains.
The carriage of the embroidery unit will move.	When the embroidery unit is attached.
The pattern is too large for the embroidery frame.	You tried to set a number of characters that will not fit within the frame.
The safety device has been activated.	The upper thread has become tangled around the bobbin case, and the needle is bent and hitting the needle plate, etc., so the machine stops (refer to page 78).
This embroidery card can not be used on this machine.	A card that cannot be used with this product has been inserted, and you tried to select a pattern from the card.
This embroidery pattern can not be used on this machine.	An embroidery pattern incompatible with this machine was selected.
This pattern cannot be used.	You try to retrieve a pattern downloaded as one for a different machine.
Total size of the pattern is too large. Rotate the pattern.	The combined character pattern is too large for the embroidery frame. You can rotate the pattern 90 degrees and continue combining characters.
Transmitting by USB	Transmitting by USB
Turn off the machine, and attach the embroidery unit.	The machine was turned on before the embroidery unit was attached.
Winding bobbin thread...	The bobbin winder is winding the bobbin.

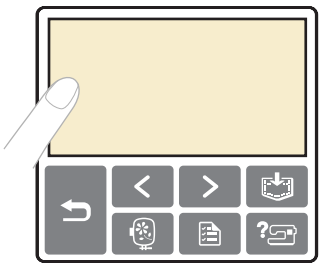
Adjusting the LCD

If nothing appears in the LCD when the machine is turned on, the brightness of the LCD is either too light or too dark. In such a case, perform the following operation.

1. **Turn off the machine.**



2. **Turn on the machine while pressing anywhere on the screen.**



3. **Press [−] or [+].**

4. **Turn off the machine, then turn it on again.**

Operation beep

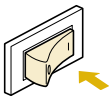
Each time a key is pressed you will hear one beep. If an incorrect operation is performed you will hear two or four beeps.

- **If a key is pressed (correct operation)**
  One beep sounds.
- **If an incorrect operation is performed**
  Two or four beeps sound.
- **If the machine locks up, for example, because the thread is tangled**
  The machine beeps for four seconds and the machine automatically stops.
  Be sure to check for the cause of the error, and correct it before continuing to embroider.

Canceling the operation beep

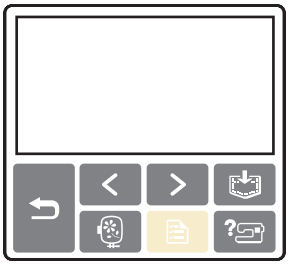
When the machine is purchased, it is set to beep each time an operation panel key is pressed. This setting can be changed so that the machine does not beep.

1 **Turn on the machine.**



▶ The LCD comes on.

2 **Press Settings / [ ] (Settings key) on the operation panel.**

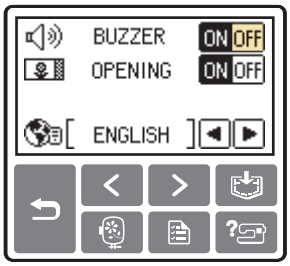


▶ The settings screen appears.

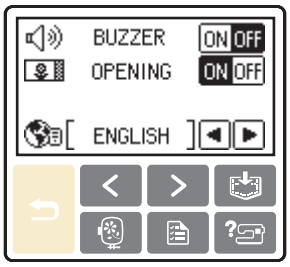
3 **Press [>] (Next page key) twice.**

▶ The screen for changing the beep setting appears.

4 **Press OFF for the buzzer.**



5 **Press [↩] (Back key).**



▶ The initial screen appears again.

3

Upgrading Your Machine's Software

You can use a computer to download software upgrades for your machine.
Visit our website at www.babylock.com for notification of available updates.

Note

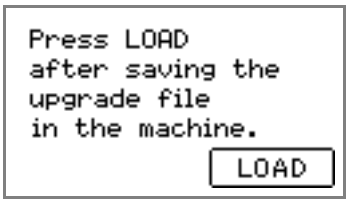
- There may be multiple upgrade files. Be sure to download all files in the correct order.
- If an upgrade file for a different model is downloaded from the Baby Lock web site, the machine may not operate correctly. Therefore, download the upgrade file for the correct model.

Memo

- While the software is being upgraded, the buzzer will not sound when a key is pressed.

1 While pressing Settings / [ ] (Settings key) turn on the machine.

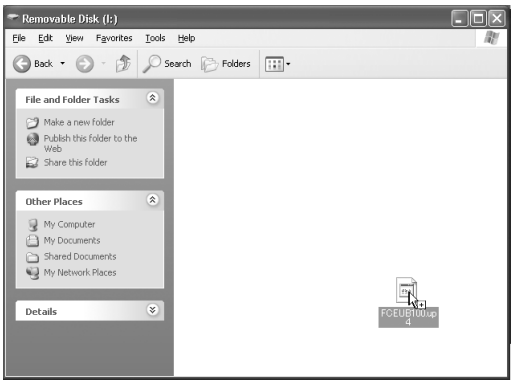
▶ The following screen appears.



2 Plug the USB cable connectors into the corresponding USB ports on the computer and on the machine.

▶ The "Removable Disk" icon appears in "My Computer" on the computer.

3 Copy the first upgrade file to "Removable Disk".

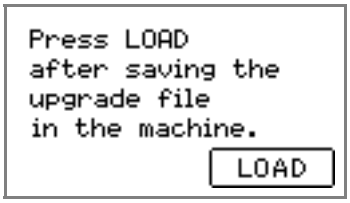


▶ The message "Connected to PC. Do not disconnect the USB cable." appears.

4 When the screen shown in step 1 appears again, press LOAD.

▶ The message "Saving the upgrade file. Do not turn main power to OFF." appears.

5 When the following screen appears, the first upgrade file is downloaded.

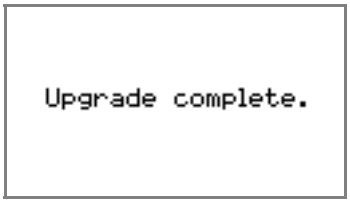


6 Copy the second upgrade file to "Removable Disk".

7 When the screen shown in step 5 appears again, press LOAD.

▶ The message "Saving the upgrade file. Do not turn main power to OFF." appears.

8 When the following screen appears, upgrading is completed.



Note

- If an error occurred, an error message appears. At this time, turn the machine off, and then start the procedure again from step 1.

9 Disconnect the USB cable, and turn the machine off, then on again.

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